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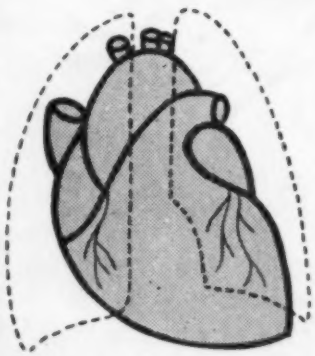

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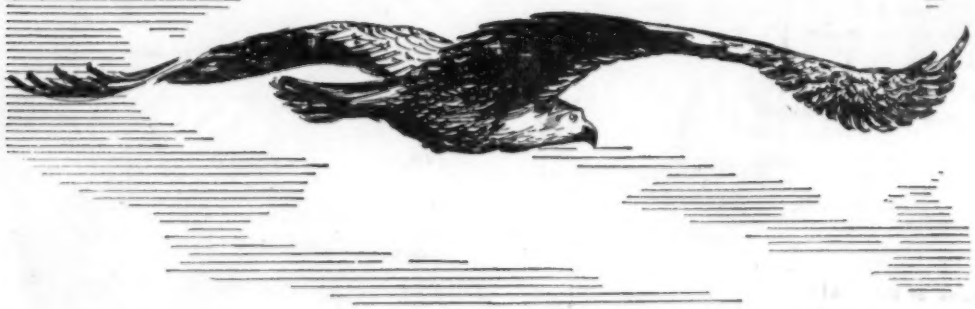

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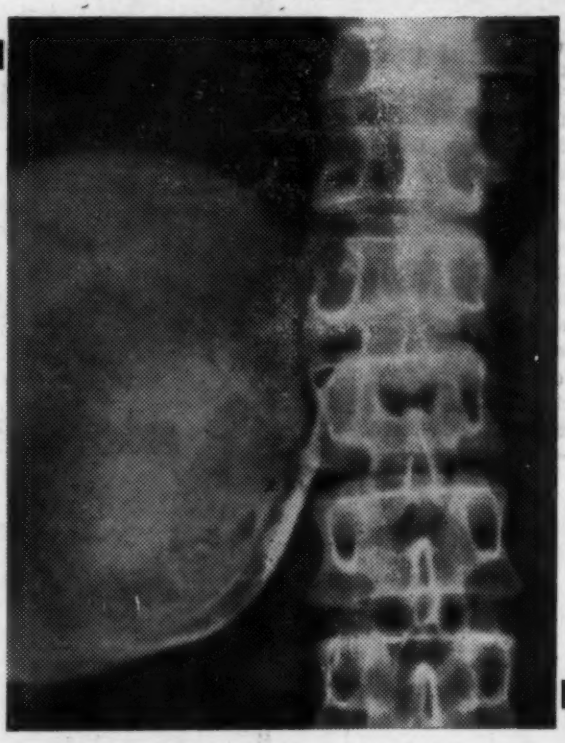

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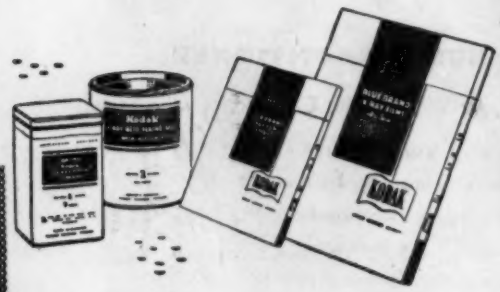

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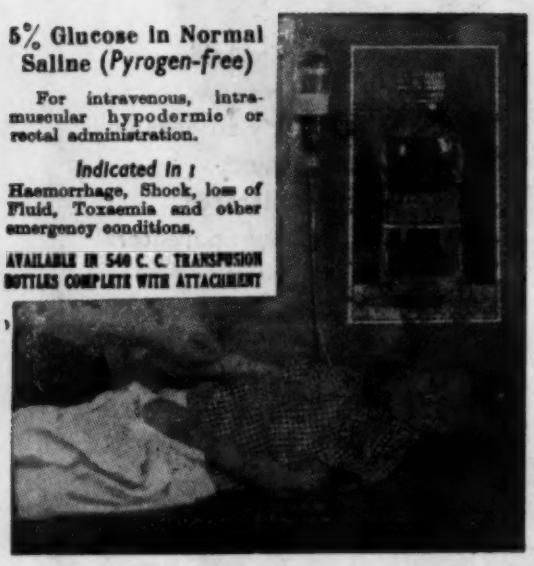

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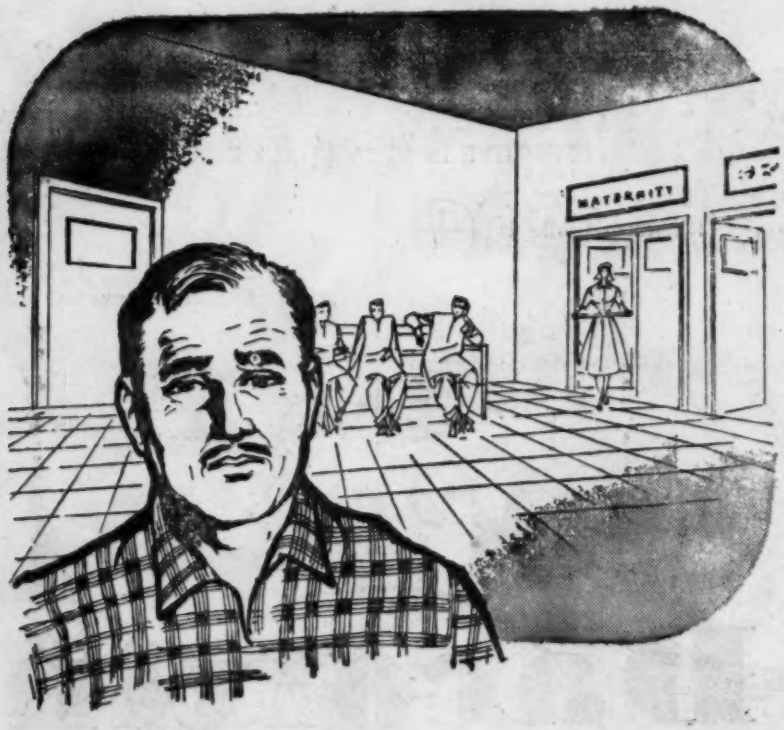

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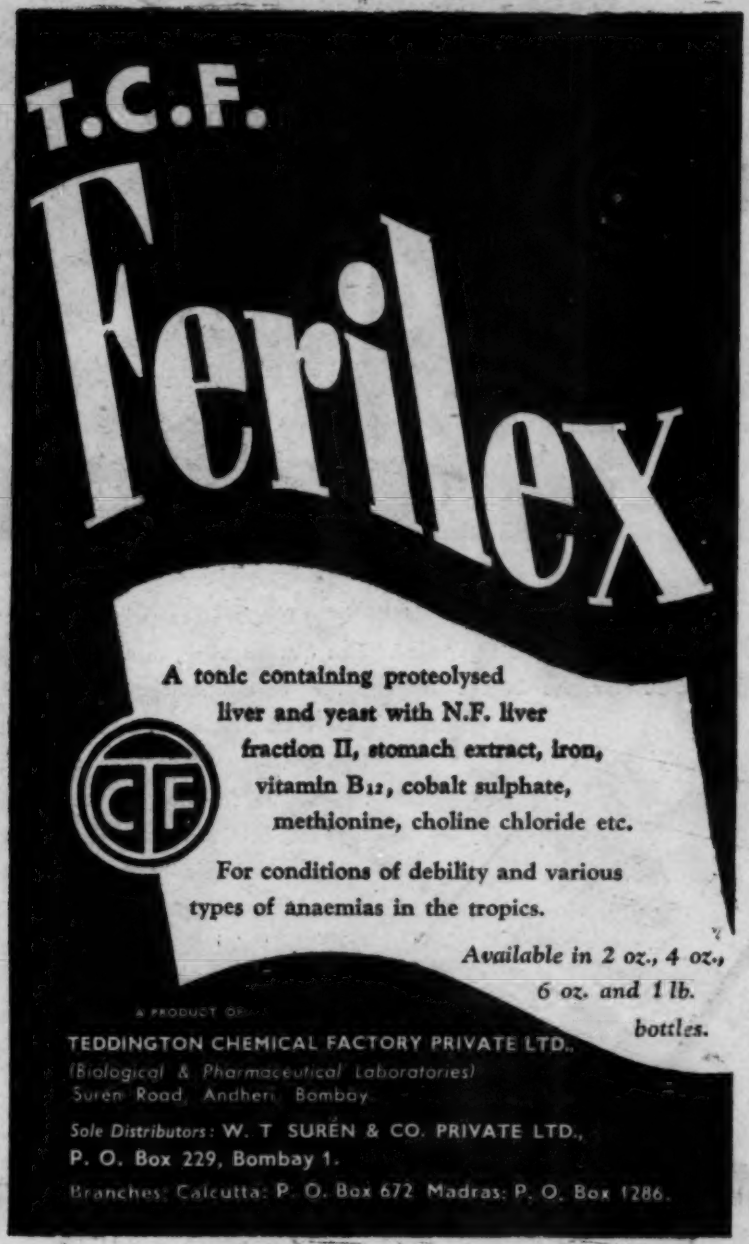
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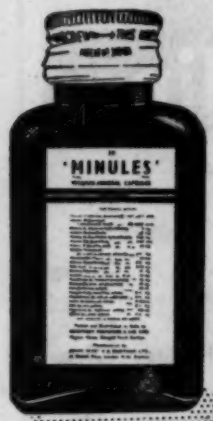

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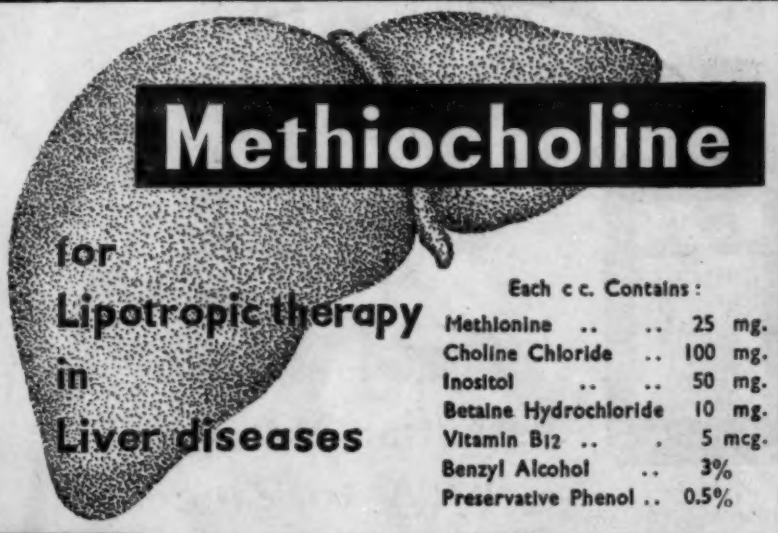

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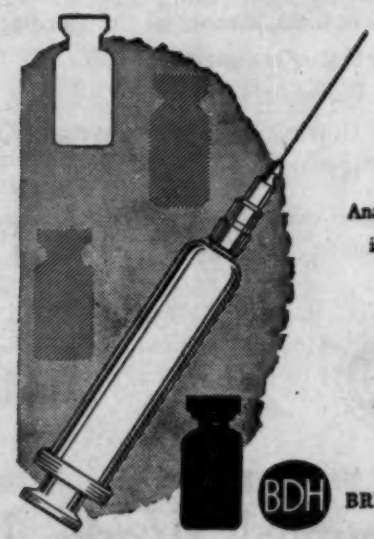

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ORIGINAL ARTICLES

SOME OBSERVATIONS ON THE AETIOLOGY OF HAEMATURIA

U. MOHAN RAU, M.S., F.R.C.S. (ENG.)

Hony. Surgeon, Government General Hospital, Madras

Gross haematuria, a common symptom indicative of urinary tract disease, is too often considered a diagnosis by itself. It is hoped that this paper will emphasise the various diseases—quite a few of them of grave prognostic significance—that produce haematuria. Only those cases where macroscopic haematuria was either the only symptom or was one of the presenting symptoms are discussed here. Microscopic haematuria revealed by a routine examination without any gross or 'naked eye' evidence of haematuria has not been taken into consideration at all.

A personal series of two hundred cases has been analysed. This figure does not represent all the cases that had been admitted or examined during the same period; only cases that had been adequately investigated and/or operated upon are included, and it is felt that the present study does afford a good index as to the causation of macroscopic haematuria.

AETIOLOGY

The aetiological factors responsible and the site (Fig. 1) for haematuria in these 200 cases are mentioned in Table 1.

RENAL DISEASES:

Congenital polycystic kidneys—Though this is a congenital condition, it is well-recognised that the disease manifests itself later on in life. The five cases in this series were in the third and fourth decades of life. In all these, the enlarged kidneys were palpable on both sides.

Inflammatory lesions of the kidney—Esch. coli and staphylococci have been the two commonest organisms that have been isolated from our patients. Gross haematuria was not a common clinical finding either in acute or chronic pyogenic inflammation of the renal pelvis. In the cases surveyed here it had been usually associated with the classical symptoms and signs of pyelitis and pyelonephritis though there were three cases where haematuria was the only clinical manifestation. *Esch. coli* was grown from the urines isolated from the diseased kidneys in these cases.

Haematuria in tuberculous infection of the kidney is an inconstant symptom. It may be entirely absent. It may occur early in renal tuberculosis or as in the four cases included in this series, may be a manifestation of fairly advanced renal tuberculosis. In all these four cases, besides other positive findings, tubercle bacilli were seen in stained specimens of the urinary sediment.

Neoplasms of the kidney—All the twenty cases were malignant tumours from the kidney substance. No benign tumour was met with in this series.

Drugs—Sulphapyridine and sulphadiazine were the worst offenders, though some of the other drugs in this group could not be completely absolved.

Filariasis—Pure haematuria is rare in filariasis. All the cases that have been recorded here, have been examples of haematochyluria, though the patients' main initial complaint was haematuria. Three of these cases had other evidences of filarial infection.

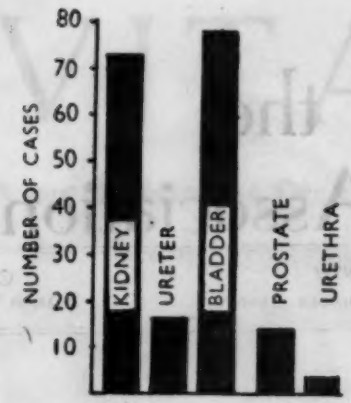

FIG. 1—SHOWS ANATOMICAL SITES OF HAEMORRHAGE.

TABLE 1—SHOWING THE AETIOLOGY AND SITE OF THE LESION

Site	Type of lesion	No. of cases	Total
Kidney ...	Congenital (polycystic) ...	5	
	Trauma, with varying grades of rupture ...	5	
	Inflammation	18	
	Neoplasms	20	
	Calculi	10	
	Others :		
	Filariasis	6	
	Drugs	5	
	Avitaminosis	1	
	Acute glomerulonephritis	1	
			71
Ureter ...	Calculi	18	
			18
Bladder ...	Inflammation	53	
	Neoplasms	20	
	Calculi	6	
	Post-irradiation ulcer ...	1	
			80
Prostate ...	Benign enlargements ...	9	
	Malignant diseases ...	4	
			13
Urethra ...	Neoplasms	2	
			2
Prepuce ...	... ...	3	
			3
Idiopathic ...	... ...	13	
			13

A note of warning is very essential here. The mere presence of microfilariae in the patient's blood or filariasis elsewhere in the body in an individual who has haematuria, does not mean that the haematuria is due to filarial infection. Similarly, finding microfilaria in the urine does not prove that the filarial worm is the ultimate cause of haematuria ; microfilariae that are circulating in the blood can be present in the urine also, whenever there is haemorrhage into the urinary tract.

It is very significant that in this series of 200 cases, several of these were from places where filariasis is rampant, only six cases have been attributed to filariasis—a very low percentage indeed.

VESICAL LESIONS :

Inflammatory vesical lesions have almost all been pyogenic in origin, though three cases were due to persisting tuberculous ulcers in the bladder, several months after nephroureterectomy.

Post-irradiation ulcer—The only case in this series is worthy of being recorded here in some detail :

Mrs. B., aged 45 years, had irradiation with radium for an early epithelioma cervix in 1953. She was completely free from symptoms of any sort till early in 1955 (nearly 14 months after the cessation of irradiation) when she started having dysuria and occasional profuse haematuria. The cervix was free from recurrence. Radiological and bacteriological investigations did not reveal any pathology in her urinary tract.

Cystoscopy revealed an irregularly circular ulcer, about 1 cm. in diameter, just to the left of the midline in the region of the *bas fond*. The ulcer was covered with a greyish slough and was surrounded by moderate oedema. There was no induration of this region, as felt per vaginum. The rest of the bladder was normal.

With symptomatic treatment, her symptoms gradually cleared off in a couple of months, when cystoscopy revealed a normal bladder. She has been symptom free to-date.

PROSTATIC DISEASES :

Benign enlargements of the prostate bled more often and more profusely than malignant enlargements of the prostate ; when the latter did bleed, they did so rather late in the course of the disease, when the malignant process had ulcerated into the urinary tract. The bleeding in benign prostatic enlargements is due to the rupture of dilated and congested veins in the posterior urethral or trigonal regions.

PREPUTIAL LESIONS :

Haematuria due to preputial causes has been due to balanoposthitis and ulceration in phimotic individuals. The urine, coming out from the orifice of this ulcerated preputial sac, was slightly blood stained. This, strictly speaking, is not blood

from the urinary system, but is included here as it has been responsible for considerable alarm.

ESSENTIAL HAEMATURIA :

In these cases, no cause for bleeding has been found. Four of them have been followed up now for over four years and they have remained quite well. No cause has as yet been found in them and there has been no recurrence of haematuria. They may have been due to attacks of focal pyelonephritis. Some of the others from this group may have the diagnosis clarified by subsequent examinations, especially during future attacks of haematuria.

But a small percentage (varying from 8 to 10 per cent in other similar series) will continue to evade a correct diagnosis. As the years progress, and as diagnostic methods and abilities improve, these cases of essential haematuria, will continue to dwindle in number.

Anatomical Site of Haematuria

If the total number of cases from each anatomical site is calculated we find that in the large majority of cases the source of bleeding was either in the kidneys or in the bladder (Table 1).

Main Causative Factors

When causative factors are re-grouped under broad headings as congenital, traumatic, inflammatory, neoplastic and other causes, it appears that the three most common causes of haematuria were inflammations, neoplasms and calculi (Fig. 2), in that order. Together, these three factors accounted for nearly 81·5 per cent of all cases of haematuria.

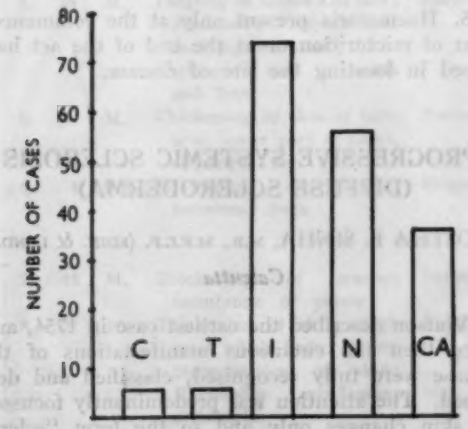

Fig. 2—Depicts the Relative Incidence of the Main Causative Factors of Haematuria.
C—Congenital. T—Trauma. I—Inflammation. N—Neoplasm. CA—Calculus.

Age distribution—The patients in this series were grouped by 10 years and the three common causes, viz., inflammations, neoplasms and calculi were then distributed into these groups as shown in Fig. 3.

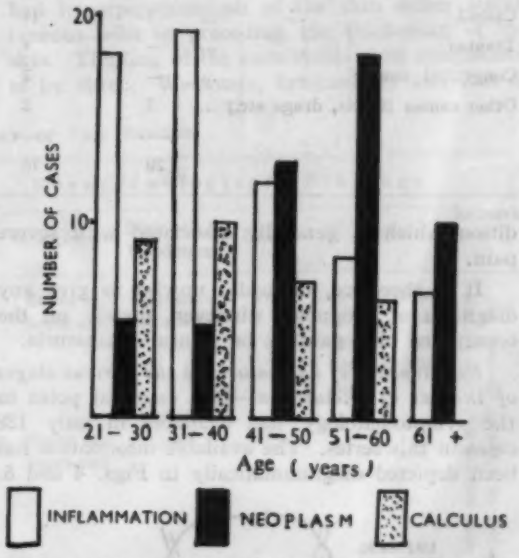

Fig. 3—Shows Age Distribution of the Three Main Causes of Haematuria.

It is obvious that inflammatory causes were most often responsible for haematuria in the very young patients. As the age of the patients increased, the incidence of neoplasms increased and between the ages of 40 and 60 years, neoplasms were more often responsible for haematuria than inflammations. Inflammations and calculi were also responsible for quite a large number of cases of haematuria even in those age groups where neoplasms occurred frequently (Fig. 3). Hence it is dangerous to dogmatise on age alone as having a preponderating influence on the aetiology of haematuria.

Association of pain—It has been customary to associate painless haematuria with neoplasms of the urinary tract. Perhaps as a rebound phenomenon, painful haematuria has been associated with a non-neoplastic condition. An analysis of our cases show that painless haematuria occurred in 29 cases and painful haematuria occurred in 75 cases (Table 2).

Thus, whereas painless haematuria was seen most often in neoplastic conditions, it was also met with in patients with urinary calculi, a con-

TABLE 2—SHOWING NO. OF CASES OF HAEMATURIA ASSOCIATED WITH PAIN AND WITHOUT PAIN

Lesion	No. of cases	
	Painless	Painful
Inflammations	—	30
Neoplasms	15	23
Calculi	7	14
Trauma	—	4
Congenital causes	—	2
Other causes (filaria, drugs etc.) ...	7	2
	29	75

dition which is generally associated with severe pain.

It is therefore, clinically unwise to give any diagnosis or prognosis whatever, merely on the occurrence of a painless or painful haematuria.

Relationship of haematuria to the various stages of the act of micturition—This essential point in the symptomatology was available in only 128 cases in this series. The available information has been depicted diagrammatically in Figs. 4 and 5.

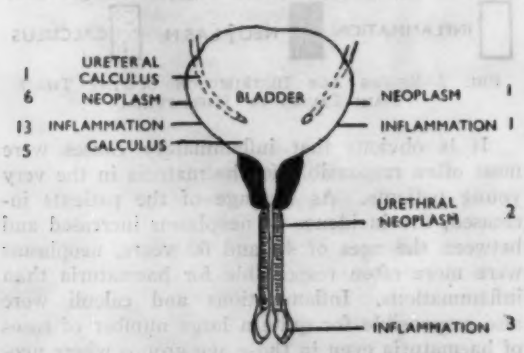

FIG. 4—SHOWING CONDITIONS WHERE HAEMATURIA WAS PRESENT (a) AT THE COMMENCEMENT OF MICTURITION (*right*) AND (b) AT THE END OF MICTURITION (*left*).

(The figures in parenthesis indicate the number of cases under each cause.) It will be seen from the figures that blood when present only at the commencement of micturition usually came from the preputial sac, urethra or prostatic regions. If haematuria was terminal and present only towards the end of the act of micturition, then probably the cause of bleeding was in the urinary bladder. Blood present in the urine right through the act of micturition was not of much diagnostic value, as it might be from the bladder, the ureter or the kidneys.

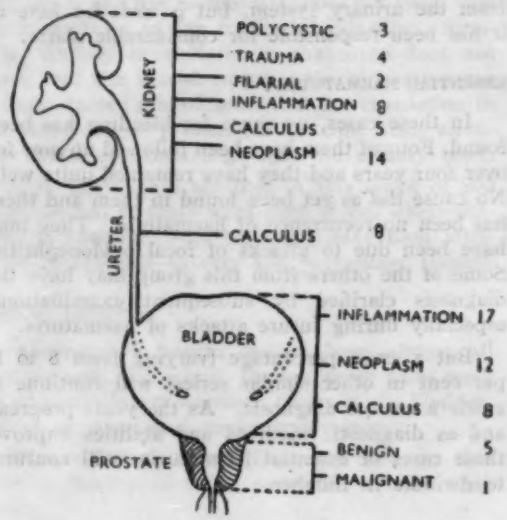

FIG. 5—SHOWING CONDITIONS WHERE BLOOD WAS WELL MIXED WITH URINE THROUGHOUT THE ACT OF MICTURITION.

SUMMARY

1. 200 cases of macroscopic haematuria have been analysed according to the causation, site of bleeding and age distribution.

2. Kidneys and the bladder were the commonest sites of haematuria.

3. Inflammations, neoplasms and calculi were responsible for haematuria in 81·5 per cent.

4. Painless haematuria, though seen most often in neoplasms, had also occurred in patients with urinary calculi, filarial infection etc.

5. Haematuria present only at the commencement of micturition or at the end of the act had helped in locating the site of disease.

PROGRESSIVE SYSTEMIC SCLEROSIS (DIFFUSE SCLERODERMA)

GOSTHA B. SINHA, M.B., M.R.C.P. (EDIN. & LOND.)

Calcutta

Watson described the earliest case in 1754, and since then the cutaneous manifestations of the disease were fully recognised, classified and described. The attention was predominantly focussed on skin changes only and so the term "scleroderma", albeit a misnomer, has until recently been retained. Hektoen (1897) pointed out that the disease was not limited to skin only and re-

ported cardiac lesions. It is now fully established that the disease is protean in its manifestations involving 'mesenchyme tissues'—'a mesenchymepathy'. Gastrointestinal, cardiac, pulmonary, pleuropericardial, renal, soft tissue changes have been described. It is apt and proper that the disease should be called "progressive systemic sclerosis" as proposed by Goetz (1945), instead of scleroderma, as it is one of the family of systemic collagen diseases.

Nine cases of this disease have been studied by me and are described here.

Symptoms and Signs

Of the nine patients, six were females. In the series under review, the age of onset was earlier than hitherto reported—the oldest patient was 24 years old. All the patients or their relations noticed skin changes—thickening of the skin. In one, the first change noticed was thickening of the mucous membrane of the palate. Majority had hyperpigmentation of the skin either simultaneous with or preceding the thickening of the skin. Tingling of the extremities were complained of by three. Weakness, fatiguability and loss of

Table Showing Summary of Case Reports

Case No.	Age	Sex	Symptoms and signs	Area of skin first affected	Roentgenological Findings				Remarks
					Oesophagus	Stomach & Duodenum	Lungs	Joints	
1.	24	F.	Hyperpigmentation of skin; thickening of skin of fingers, forearm, forehead, neck; Raynaud's syndrome; tingling of extremities; arthralgia	Fingers	Stasis at lower end	Hypotonic stomach	Nil	Tapering of terminal phalanges with cortical thinning	Soft tissues and heart showed no radiographic changes. The E.C.G. was normal and skin biopsy in each case showed diffuse scleroderma—mucous membrane biopsy in Case 7 showed the same changes.
2.	10	F.	Tingling of fingers and toes; thickening of skin of fingers, toes, forearm, face, lower extremities; hyperpigmentation of skin; Raynaud's syndrome	Fingers and toes	Stasis at lower end	...	Nil	...	
3.	24	F.	Hyperpigmentation of skin; stiffness of whole body; Raynaud's syndrome; affection of skin of whole body	Fingers	As above	...	Fibrosis rt. side	...	
4.	8	M.	Tingling of hands and feet; Raynaud's syndrome; dark pigmentation; thickening of skin of hands and feet	Fingers and toes	As above	...	Nil	...	
5.	20	M.	Thickening of skin of forearm, lower part of chest, abdomen, leg	Forearm	No change	...	...	...	
6.	4	Fch.	Thickening of fingers, forearms, neck	Fingers	No change	...	...	Terminal phalanx tapering with cortical thinning	
7.	15	M.	Thickening of mucous membrane of palate	Palate	No change	...	...	...	
8.	24	F.	Thickening of skin of almost whole body. Hyperpigmentation of skin; Raynaud's syndrome; arthralgia	Fingers	...	...	...	...	
9.	8	F.	Thickening of skin of fingers and toes; Raynaud's syndrome; arthralgia	Fingers and toes	No change	Nil	...	Normal	

weight were other complaints. Joint pains were complained of by three patients. Raynaud's syndrome was present in six cases. The skin changes were characteristic. There was thickening and hardening of the skin. The fingers were, in four cases, most affected. They were thin and tapering and the skin was thick, taut, wrinkleless and stretched—restricting finger movements. In two cases, the disease was widespread affecting the skin of almost the entire body (Fig. 1, *vide* Plate). None complained of dysphagia.

Investigations

Laboratory findings—Anaemia was found in 3; E.S.R. was high in 5. Leucocytes were within normal limit. In 2 cases, blood urea, N.P.N. and sugar were estimated and found normal.

Urine showed no changes.

Radiological investigations—Roentgenograms after barium swallow revealed oesophageal lesions in 4—there was delay, arrest, stasis in the passage of the meal at the lower end of the oesophagus (Fig. 2A and B, *vide* Plate).

Barium meal examination of the stomach and the duodenum in 2 cases revealed hypotonic stomach in one.

X-ray of the chest showed pulmonary fibrosis in one (Fig. 3, *vide* Plate).

Orthodiagram of the heart in 4 cases showed normal cardiac silhouette.

X-ray of the soft tissue for evidence of calcification (Thibierge-Weissenbach syndrome) was negative in all. X-ray of the fingers for bony changes showed the terminal phalanges tapering with diminution of cortical bone in 2.

Electrocardiographic findings were negative in all the 5 cases examined. One explanation may be put forward for the negative findings and that is, the age of these cases were tender.

Biopsy—Biopsy of the skin was done in 8 cases —all revealed evidence of typical diffuse sclerodermal changes (Fig. 4, *vide* Plate).

Diagnosis

The skin changes are tell-tale of scleroderma. Dermatomyositis has to be excluded. Those cases that have hyperpigmentation to start with are to be differentiated from other types of melanoderma. Raynaud's syndrome may be due to diverse causes. But the most important is the diagnosis of scleroderma from Werner's syndrome in which condition the distinguishing features are physical immaturity, early senescence, premature cataract, scleroderma-like skin changes, tendency to diabetes mellitus and histologically different changes of skin. 'Acrosclerosis' has been distinguished as a different entity. These cases begin in the fingers and are associated with Raynaud's syndrome but the distinction is not widely accepted.

Treatment

Olive oil, vitamins, especially vitamins C and E, priscol in cases presenting Raynaud's phenomena, thyroid, have been tried in these cases but without any effect. A.C.T.H. and cortisone were administered in 2 cases with marked benefit in one case. Clinical and histological improvement have been reported using H.P.C.* but supplies are not available here. Hyaluronidase has been reported to be injected locally with some results.

Discussion

Progressive systemic sclerosis is a systemic collagen disease and is not rare as thought to be. The widespread involvement of the connective tissue—mesenchyme—is striking and has prompted the use of such terms as 'mesenchymopathy', 'sclerodermic collagenosis'. Although the involvement of the skin is almost universal, multiple visceral lesions have been described. Lesions in the buccal mucosa (Case 7) and soft tissues including muscles have been reported. Various aetiological factors, endocrine dysfunction, error in calcium metabolism are mentioned only to be discarded. That it is a member of the collagen diseases has been established. An allergic antigen-antibody like reaction has been postulated by Pagel (1951). Kampmier (1950) has suggested that 'intensity and location of collagen disease reaction, presumably allergic, determine particular expression of the illness—periarteritis nodosa representing one extreme and scleroderma the other'. Moreover, there is the instance of a single case showing Libman-Sack's disease, periarteritis nodosa, scleroderma, rheumatic infection and rheumatoid arthritis. Pagel (*loc. cit.*) has postulated that difference in the intensity and diffuseness of the reaction are determining factors: platelet thrombosis—generalised subintimal reaction; periarteritis nodosa—a primary medial involvement; acute disseminated lupus—severe rapid connective tissue reaction with oedema and necrosis predominating and progressive systemic sclerosis characterised by slow, torpid, generalised mesenchymal response with fibrosis and sclerosis predominating.

---

* Hydroxyphenylcinchonic acid.

Fig. 1—Showing widespread skin changes.

Fig. 2A—Ba. filled oesophagus showing stasis. (P. A. view)

Fig. 2B—Ba. filled oesophagus showing stasis (Lateral view)

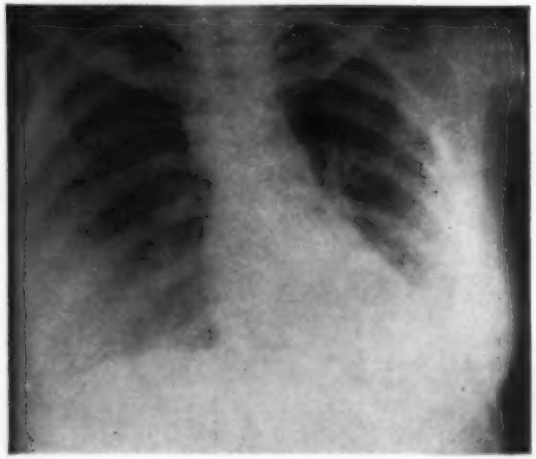

Fig. 3—P.A. view of chest showing pulmonary fibrosis.

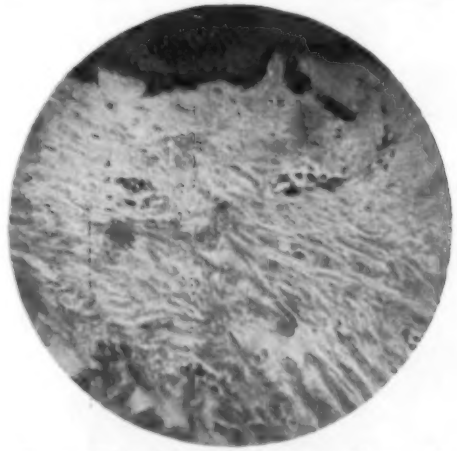

Fig. 4—Photomicrograph showing evidences of diffuse sclerodermal changes.

Fig. 1—Resected left lung showing collar button completely obstructing the left main bronchus (Case 8 *vide* Table 1).

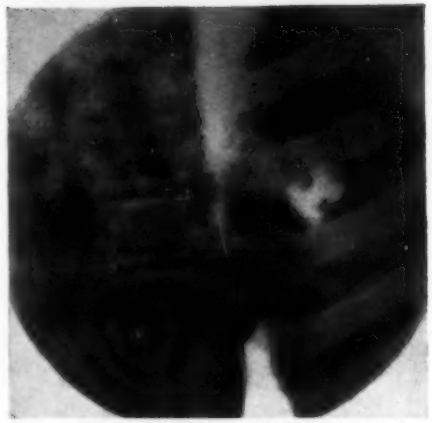

Fig. 2—Spot film showing collar button lodged in the left main bronchus (Case 8, *vide* Table 1).

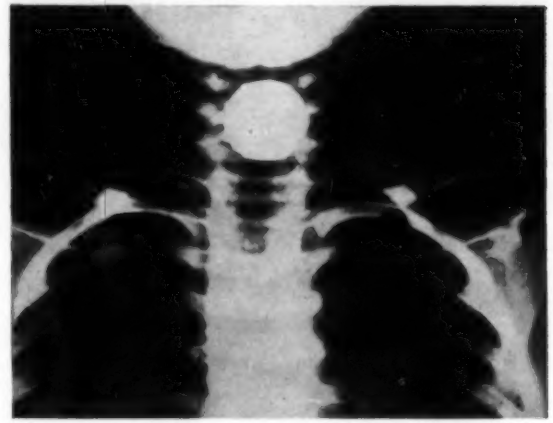

Fig. 5—Roentgenogram showing a coin lodged in the hypopharynx of a small child (Case 11, *vide* Table 2).

TAKARO ET AL—*Foreign Bodies in the Air and Food Passages (page 265)*

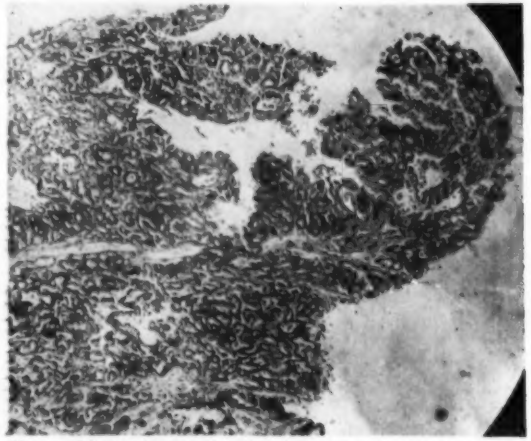

Fig. 2—Photomicrograph showing vascular stroma and epithelial components. (H. & E. × 50).

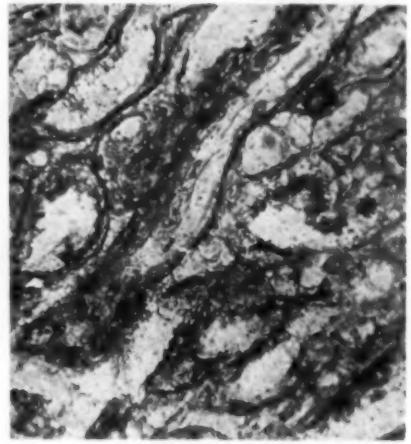

Fig. 3—Photomicrograph showing reticulin fibres in the stroma and blood vessels. (Reticulin × 450).

Fig. 4—Photomicrograph of gallbladder wall showing thick band of collagen tissue replacing epithelium and collection of inflammatory cells in the muscle coat with congested blood vessels. (H. & E. × 225).

ROY ET AL—*Papilloma of the Gallbladder (page 273)*

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FOREIGN BODIES IN THE AIR AND FOOD PASSAGES

TIMOTHY TAKARO, M.D.,
EUGENE H. EVANS, M.D.,
ARCHIBALD G. FLETCHER, JR., M.D.,
AND
K. BANNERJEE, M.B.B.S.,
Wanless Hospital, Miraj, and
Wanless Tuberculosis Sanatorium, Wanlesswadi

INTRODUCTION

Because of the rather dramatic nature of the situation to which they give rise, foreign bodies inhaled or swallowed have always been a source of keen interest for both lay persons and physicians, from time immemorial. An incredible variety of objects and substances have managed to slip by the glottic guards or the cricopharyngeal pinchcock of man, especially in the early years of life. Although the earliest recorded case of the removal of a foreign body from the air passages was that of Verduc, in 1717, at which time a bone was removed from a patient's trachea by tracheotomy, Bonzini in 1795 was first to attempt an oesophagoscopy. About 100 years later, Kirstein with his "autoscope" and Killian with a 9 mm. tube, performed the earliest known direct laryngoscopy and bronchoscopy, respectively. In 1897, Killian, who has been called 'the father of bronchoscopy' removed a foreign body from the lower air passages with his bronchoscope (Harcourt, 1953).

The modern era of endoscopy of the air and upper food passages was ushered in by Chevalier Jackson, who perfected the instruments, and popularised the techniques used today (Jackson and Jackson, 1950).

We have been impressed both by the frequency with which one meets the problem of foreign body in the larynx, trachea, bronchi, and oesophagus, even in a relatively small medical centre, and by the difficulties which sometimes attend the management of patients who have inhaled or swallowed foreign bodies, especially if the subjects are very small. Because of these facts, we have been prompted to review our experiences over the last three years.

Twenty-four patients have been seen during this period of time, in whom a diagnosis of suspected or actual foreign body in the air or food passages was made. In thirteen patients the air passages were involved, and in eleven, the food passages. The patients ranged in age from 9 months to 55 years, and pertinent data regarding them are tabulated (Tables 1 and 2).

It is interesting to note that 9 of the 13 patients in whom the respiratory passages were involved, were 5 years of age or younger (the largest number being in their first year of life), while of eleven in whom the food passages were affected, only 4 patients were 5 years of age or younger, and none was in the first year of life. Undoubtedly many infants swallow foreign bodies which pass through quite safely and never come to the attention of the physician, or even of the mother, for that matter! The sexes were evenly represented by the respiratory group, but males predominated in the other group. The ground-nut was implicated most commonly, and especially in the youngest age group, in the respiratory passages; next in order of frequency were tamarind seeds, and betel-nuts; with single cases of pin, collar button, vegetable matter, and water-melon seed. In the oesophagus, coins lodged most frequently; then teeth and bones; and there were single instances of a needle, nails, and a piece of tin.

From this point onward, the two groups will be considered separately, for, as will be presently seen, the management of the respiratory group is much more difficult, and the prognosis much more serious than in the group in which the oesophagus and gastro-intestinal tract are involved. The air passages of infants especially, are extremely narrow, and serious laryngeal oedema, or suffocating tracheobronchitis occurs with dismaying ease and rapidity with life-threatening implications, in these small subjects. Beyond this, permanent lung destruction occurs in a matter of weeks or months, distal to the foreign body, which has not been promptly removed from the air passages, and such patients may have to undergo major thoracic surgery to rid them either of their foreign body, or of the diseased portion of lung, or both.

TABLE 1—SHOWING DETAILS OF PATIENTS WITH FOREIGN BODIES IN THE AIR PASSAGES

No.	Age and sex	Foreign body	Duration in air passages	Procedure and remarks	Result
1.	12 months female	Ground-nut	30 hours	Bronchoscopy uncomplicated	Cured
2.	20 years male	Needle	4 days	Bronchoscopy and oesophagoscopy, needle not seen, but disappeared from x-ray of chest after these procedures	Cured
3.	18 months	Ground-nut	3 days	Bronchoscopy and tracheostomy. Respiratory arrest during bronchoscopy	Died
4.	5 years female	Tamarind seed	1 month	Bronchoscopy and tracheostomy with bronchoscope passed through tracheostomy opening. Respiratory arrest briefly during initial bronchoscopy	Cured
5.	9 months male	Ground-nut	5 hours	Bronchoscopy and tracheostomy. Developed severe laryngotracheobronchitis.	Died
6.	9 months female	Ground-nut	24 hours	Bronchoscopy (4 mm. 'scope) and tracheostomy. Developed severe laryngotracheobronchitis requiring 27 bronchoscopic aspirations through tracheostomy	Cured
7.	10 months female	Betel-nut	24 hours	Bronchoscopy (4 mm. 'scope). Required tracheostomy 36 hours later due to laryngeal oedema	Cured
8.	12 years male	Collar button	4 months	Bronchoscopy : bronchus ruptured. Pneumonectomy (destroyed lung)	Cured
9.	11 months female	Vegetable matter	19 days	Bronchoscopy : 4 mm. 'scope too big. Bronchoscopy through tracheostomy. Severe laryngotracheobronchitis.	Died
10.	4 years male	Tamarind seed	1 month	Repeated bronchoscopies unsuccessful. Tracheostomy and left pneumonectomy. F.B. slipped into rt. main bronchus inadvertently	Died
11.	13 years male	Tamarind seed	4 hours	Direct laryngoscopy—no complications	Cured
12.	3 years	Watermelon seed	6 months	Bronchoscopy failed; bronchoscopy through tracheostomy. No complications.	Cured
13.	55 years male	Betel-nut fragments	1 year	3 previous bronchoscopies failed. Betel-nuts removed by bronchoscopy. Bronchiectatic lower lobe resected.	Cured

FOREIGN BODIES IN AIR PASSAGES

Pathogenesis—In order to enter the trachea, a foreign body must successfully slip by the shield-like epiglottis, and the apertures formed by the superior laryngeal structures, the ventricular bands, and the vocal cords, all of which are capable of rapid and practically complete closure, under the stimulus of contact. In addition, the foreign body must withstand the blasting action of the cough reflex, one great weakness of which, however, is the powerful inspiratory component which immediately precedes the explosive expiratory phase. This is almost certainly responsible for the actual admission of the foreign body through the triple glottic guards and into the trachea. The foreign body may then be almost immediately expelled, by the violent coughing which its presence provokes, or it may, by some mischance, become wedged into a bronchus, or changed in position in such a way that it cannot negotiate the glottis again in an outward direction, and thus lies loosely in the trachea, or tightly in the larynx. The right lung is more often involved than the left because of the anatomical arrangement of the tracheobronchial tree, in which the right main bronchus branches off the trachea more directly than the left, and is slightly larger in diameter than the left. In addition, the slight normal leftward deviation of the carina also favours involvement of the right main bronchus. In our series, the right main or a branch bronchus was involved in seven cases, the trachea in two, the left main in two, and the larynx in one. The site of lodgement may, of course, shift in the course of time, due to cough, change in position of the patient, or to other factors.

The reaction of the tracheobronchial mucosa depends upon the nature of the foreign body, including its size, shape, and composition. Metallic, or smooth, or small objects provoke less in-

TABLE 2—SHOWING DETAILS OF PATIENTS WITH FOREIGN BODIES IN THE FOOD PASSAGES

No.	Age and sex	Foreign body	Duration in air passage	Procedure employed and remarks	Result
1.	16 years male	Needle	15 hours	X-ray of chest and abdomen, laryngoscopy—nothing seen	Cured (passed in stool)
2.	19 years male	Two nails	24 hours	X-ray of stomach showed nails	Cured (passed in stool)
3.	11 years male	Bone fragment	4 days	Oesophagoscopy showed a "grey mass" 15 cm. from incisors—could not be removed	Cured (presumably passed in stool)
4.	2½ years male	Sheet of tin	7 days	Oesophagoscopy; apparently F.B. removed; record incomplete	Cured
5.	55 years male	Two artificial teeth	3 days	Oesophagoscopy—nothing seen	Cured (presumably passed in stool)
6.	3 years male	Coin	12 hours	Laryngoscopy and oesophagoscopy—nothing seen	Cured (presumably passed in stool)
7.	17 years male	Bone fragment	24 hours	Laryngoscopy and oesophagoscopy—nothing seen	Cured (presumably passed in stool)
8.	45 years male	Two artificial teeth	24 hours	Oesophagoscopy—small ulcerated area, posterior wall	Cured (presumably passed in stool)
9.	50 years female	Unknown	24 hours	Oesophagoscopy—nothing seen	Cured
10.	5 years female	Coin	8 days	Oesophagoscopy under local anaesthesia failed; oesophagoscopy under general anaesthesia with removal of coin	Cured
11.	4 years male	Coin	3 days	Coin removed under general anaesthesia on second attempt: coin seen only on withdrawing the oesophagoscope	Cured

flammatory reaction than do objects of vegetable, or animal origin, or those having sharp edges, or which are large. The reaction of the tracheobronchial mucosa, together with the foreign body itself, largely determines the course of subsequent events. The foreign body may incompletely block the passage of air on inspiration and expiration, producing an asthmatoid wheeze in the subject, or, if it is moving freely up and down in the trachea, an audible and palpable clicking or slapping noise is produced as it hits the glottis, during breathing and coughing. If ingress of air by the partially obstructing foreign body is allowed, but egress is checked by a valve-like action of the foreign body against the swollen mucosa, obstructive emphysema of the affected segment, lobe, or lung may supervene, with shift of the mediastinum to the opposite side, diminished breath sounds on the affected side, hyperresonance, and increased radiolucency on the radiogram of the affected side. If egress of air is allowed, but ingress prevented by a similar check valve acting in reverse manner to the above, obstructive atelectasis of the affected segment, lobe, or lung occurs, with shift of the mediastinum toward the affected side, diminished breath sounds on this side, dullness, and diminished radiolucency on the radiogram. A complete block of a bronchus by the foreign body (Fig. 1, *vide* Plate) in which neither entrance nor exit of air is possible, also results in obstructive atelectasis, with effects similar to the previously mentioned type of obstruction, but these effects are less rapidly achieved.

It is also possible, of course, for one type of obstruction to change to another, by a shift in position of the foreign body, increased oedema of the bronchial mucosa, or to other factors. Finally,

if the bronchus remains blocked for a longer period of time, the obstructed portion of lung distal to the block undergoes invasion by ever-present bacteria, with infection, and the accumulation of pus in the bronchi. However, it may be months or years before permanent destruction of lung tissue occurs, with bronchiectasis or abscess formation, when the foreign body is metallic in nature. On the other hand, a violent suppurative process quickly occurs when the foreign material is vegetable in origin.

Symptoms and signs—From the above, it can be surmised that the symptoms and signs may be variable, being dependent upon the type of obstruction produced. Paroxysmal cough, choking, gagging, wheezing, and cyanosis, which may mark the entrance of the foreign body into the airway, may be followed by a symptomless period, following which fever may be noted, cough may return, and sputum may be produced. The classic symptoms and signs of chronic pulmonary suppuration may finally be seen, and pulmonary tuberculosis may be suspected, as it was in at least two of our cases (Cases 8 and 10).

Diagnosis—A careful history is of first rank importance. Mothers of creeping infants should be closely questioned about ground-nuts or other foreign materials which these small explorers might have put into their mouths, and about sudden episodes of coughing, wheezing, and gagging and choking. The absence of symptoms and signs by the time the child is brought to the physician should not be a reason for complacency. Any suggestion of the possibility of a foreign body having been inhaled should lead to very careful physical examination and x-ray of the chest, (Fig. 2, *vide* Plate) and often, to endoscopic examination.

Treatment—Most foreign bodies can safely be removed from the tracheobronchial tree or larynx by means of the bronchoscope or laryngoscope, and the proper foreign body forceps. Unless an instrument of the correct size is available, and the correct type of forceps, it is safer to send the patient to a centre equipped with such facilities than to wait for expulsion of the foreign body spontaneously (which sometimes rarely occurs) (Puttaiya and Janardhana, 1954) or to attempt to remove it with inadequate equipment. Infants are tragically prone to laryngeal oedema which may readily be produced by unskilful instrumentation or by instruments which are too large in size. Another means of successful removal of foreign bodies is *via* a tracheostomy, but this carries in its train a host of complications in the tiny subject. Rapid drying of the normal or abnormal bronchial secretions in these kiddies leads to repeated dangerous obstruction of the small bronchial orifices, with need for repeated emergency removal *via* the tracheostomy opening. A fatal infantile tracheobronchitis may also supervene. One infant had to be bronchoscoped 27 times following tracheostomy over a period of several weeks, before it could permanently be rid of obstructing crusts; and two infants died of tracheobronchitis shortly after tracheostomy following successful removal of foreign bodies. The tracheostomies had to be performed because until recently, a bronchoscope smaller than the 4 mm. standard Jackson bronchoscope was not available and this size is too large for the Indian infants. A specially designed 3·5 mm. infant bronchoscope is drawn to scale next to the standard 4 mm. Jackson bronchoscope (Fig. 3). It

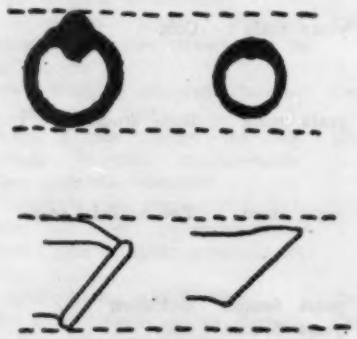

FIG. 3—STANDARD JACKSON CHILD'S BRONCHOSCOPE AND HOLLINGER-JACKSON INFANT BRONCHOSCOPE.
On the left, 4 mm. standard Jackson child's bronchoscope, cross section and side view, of tip, drawn to scale beside a 3·5 mm. Hollinger-Jackson infant bronchoscope, on the right. Note how improved design of the smaller bronchoscope allows much smaller outside diameter, while encroaching very little on working space within. These few millimeters may be life-saving in infants.

can be seen at a glance that, although the inside working space is very little reduced in the smaller 'scope, the outside diameters are very much smaller. These few millimeters may make all the difference between success and failure in this type of work.

We have recently begun to employ a home-made device to create a moist atmosphere for these cases, by introducing into a clear plastic box placed over the patient's head, "cold steam" produced by forcing compressed air from the exhaust vent of an ordinary suction pump, through a small hand-nebulizer (Vapo-nephrin or DeVilbiss

No. 40) containing a constant supply of an oxy-ethylated tertiary octyphenol-formaldehyde polymer detergent solution from a drip bottle. (Fig. 4). This apparatus successfully produces a

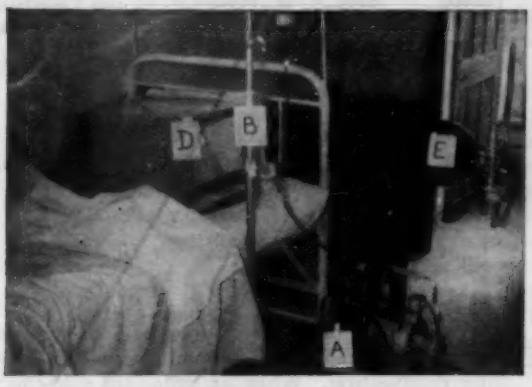

FIG. 4—HOME-MADE APPARATUS DESCRIBED IN TEXT FOR PRODUCING "COLD STEAM" ATMOSPHERE.
At A, an ordinary suction pump, to the exhaust vent of which a rubber tube is attached. This supplies compressed air to the nebulizer (an Asthma-Nefrin plastic nebulizer) at B. From the mouth piece of the nebulizer, a wide bore rubber tube conducts "cold steam" into the home-made clear plastic box shown at D, which covers the patient's head. The infusion bottle, the tip of which can be seen at the upper border of the photograph, provides a constant supply of detergent solution (Alevaire) *via* an intravenous drip, into the nebulizer. At E, an oxygen cylinder stands ready, to add oxygen to the plastic box, if needed.

cold moist atmosphere which tends to liquefy the thin crusts and secretions, and imitates in this respect, much more complex and expensive apparatus developed and recently described in the American literature (Albers, 1943 ; Ravenel, 1953; Denton, 1954 ; and Denton, 1955).

Transpleural bronchotomy, a major intrathoracic procedure, has also been safely and successfully employed. Four cases have been described by Thomas *et al* (1955) in Vellore. When the lung has been permanently damaged, however, pulmonary resection will be necessary, and this was done on three of our cases. By a tragic set of circumstances, one child died after a successful pneumonectomy, because the foreign body, which had inadvertently been left behind, slipped into the opposite bronchus and asphyxiated the child. Thus it can be seen at a glance that foreign bodies in the air passages are attended by a very appreciable mortality.

FOREIGN BODIES IN THE FOOD PASSAGES

This condition, generally speaking, is much more benign. In a very large series of 755 foreign bodies swallowed by infants and children, about one quarter lodged in the oesophagus, and required endoscopic removal, with one death (Gross, 1953). The vast majority of objects, once they reach the stomach, pass through the entire gastro-intestinal tract safely, even though they are sharp. Of our series, although oesophagoscopy was done in 9 cases, a foreign body was recovered in only three. In the reminder, the foreign body had passed on to the lower gastro-intestinal tract and was eventually safely eliminated. There were no deaths in this small series.

Symptoms and signs—Symptoms of dysphagia, or inability to swallow, or of choking, and vague discomfort may attend the foreign body which has lodged in the oesophagus. If the foreign body is lodged for a long time in the gullet, respiratory symptoms and signs may develop due to reaction in the adjacent larynx or trachea. Rarely, perforation of the oesophagus may occur, with the development of mediastinitis, pericarditis, or empyema, or even perforation of the aorta. Most of these complications are not now as serious as they once were, because of the broad spectrum antibiotics, but they require prompt surgical intervention to repair the injured oesophagus, or drain a collection of pus (Overstreet and Ochsner, 1955). Occasionally, a pre-existing oesophageal lesion, such as congenital stenosis, inflammatory stricture, or malignancy, will be the cause of the lodgement of the object in the oesophagus. This was not seen in any of our cases, but was present in 10 per cent of Gross' series of 151 cases. Most objects tend to lodge in the cricopharyngeal portion of the gullet.

Diagnosis—X-ray of the oesophagus from the larynx to the diaphragm may indicate the exact level and nature of the foreign body, if it happens to be radio-opaque. Coins in the oesophagus tend to lie transversely (in a coronal plane) while those in the trachea often lie in the sagittal plane,—a point of some diagnostic importance in viewing the x-ray (Fig. 5, *vide* Plate). A lateral cervical film may reveal a bone fragment in the oesophagus which may not be visible on the anteroposterior view.

Treatment—If the foreign body is in the oesophagus, prompt endoscopic removal is indicated, usually under local anaesthesia. Foreign bodies in the cricopharyngeal region can easily be missed by the endoscopist on entering, because the mucosal folds of the oesophagus in this region may completely hide it from view. When the oesophagoscope is slowly withdrawn, however, the foreign body may be seen. Again, instruments of the proper size and type are essential for success.

Foreign bodies in the gastrointestinal tract are best treated conservatively, their progress being watched by x-ray of the abdomen taken daily. If a sharp object, especially, seems to be making no progress for three or four days, then laparotomy and removal of the foreign body is indicated. Some objects may take weeks to pass out the anus, but 90 per cent of all foreign bodies which enter the stomach will eventually be safely passed, without the need for surgical interference.

Discussion

Physicians should warn mothers of small children of the dangers of allowing creeping infants to put ground-nuts or other small objects into their mouths. They should suspect foreign body in the airways or oesophagus when obscure respiratory symptoms or dysphagia present themselves. The earlier the foreign body is removed from the lungs and oesophagus, the better. Foreign bodies in the air passages are associated with a very appreciable mortality rate, because of the occasional complicating tracheobronchitis and laryngeal oedema, following instrumentation, or the need for major surgery, when it is indicated. Foreign bodies in the oesophagus are not quite so dangerous but should be removed promptly. In the lower gastro-intestinal tract, the foreign body can, in most cases, be treated conservatively.

Summary

We have reviewed our experience with 24 cases of foreign body in the respiratory and food passages. Infants and children were involved most commonly with foreign bodies in the airways, while older patients were more commonly found in the group involving swallowed foreign bodies. The pathogenesis, symptoms, and signs, diagnostic aids, treatment, and complications of both types of condition have been outlined.

Acknowledgments

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ACUTE DERMATITIS PRODUCED BY A PROPRIETARY TIN PREPARATION

P. L. DESHMUKH, M.D., D.T.M. & H., F.C.P.S.,

Honorary Physician, Sassoon Hospitals, Bombay

Many times one uses in practice widely advertised patent medicines, without caring to know their composition. When an untoward side-effect, not mentioned in the descriptive brochure occurs, one is at a loss to explain and treat it adequately. Following is the report of a case which illustrates this important point.

Case Report

A young healthy male, aged 24, complained of frequent eruption of boils on the body. He was treated outside with a few daily injections of crystalline penicillin and was advised to take Vi-stannyl tablets, two tablets three times a day. After consuming about 60 tablets, he complained of burning all over the body, and in the pit of the stomach, a generalised erythematous rash, fever upto 101°F, nausea and general feeling of great discomfort. Next day the patient had an extensive papular and vesicular rash on the trunk and the limbs. He received a few more injections of penicillin but got worse.

On examination, he was found to be suffering from generalised acute dermatitis with scaly rash all over the body below the head and face. He was running a temperature of 102°F. He had no sleep during the previous night due to intense burning sensation of the body and the pit of the stomach. He had marked anorexia, nausea and occasional vomiting. On learning that he had consumed 60 tablets of Vi-stannyl, I referred to the descriptive literature and found out the composition of the tablets. To my surprise I found that the tablets in addition to stannous oxide and tin powder contained di-sodium methyl arsenate 5 mg. per tablet. This solved the riddle of the aetiology of the patient's condition because now the acute dermatitis appeared to be obviously due to arsenic. On putting the patient on BAL and cortisone he rapidly improved and was completely cured in about a fortnight.

Comments

The case has a great educative value. When prescribing a patent medicine it is obligatory that

the doctor should know the full composition with special reference to any drug contained in it which is likely to produce a toxic effect if the medicine is inadvertently continued for an unduly long time by the patient. After knowing that there is such a potentially toxic drug in the composition of the medicine, the doctor should warn the patient of the probable undesirable effects and instruct him to report immediately after experiencing anything unusual during the use of the medicine so that he may immediately receive the antedotal treatment. If the doctor is not aware of the composition of the medicine he prescribes, the aetiology of the undesirable reactions is sought for elsewhere and the correct diagnosis is missed with the consequent delay in instituting the proper treatment.

The manufacturers also have to take a note from this case. They should not only mention a potentially toxic drug like arsenic, mercury in the composition but also draw special attention of the doctor to it in the 'uses and side effects' described in the brochure. They should warn the doctor of the probable toxic effects of these components if large doses are continued for a long time without recess.

SUMMARY

A case of acute dermatitis produced by the toxic effects of arsenic contained in a proprietary drug (Vi-stannyl) is described.

PRACTITIONERS' SERIES

KWASHIORKOR†

RANAJIT K. BHATTACHARYYA, M.B. (CAL.)

Nabadwip (West Bengal)

INTRODUCTION

This diasease as a clinical entity was recognised and described among the Africans of the Gold Coast (West Africa). The exact African term used by the natives for this particular condition in the Gold Coast is "Kwashiorkor". "Kwashi" means a boy, and "orkor" red. This weird term when first published at once lent a charm into it and created an enthusiasm for investigation, and found an easy introduction in the western medical vocabulary. In fact research had long been proceeding on disorders of nutrition and deficiency diseases, and reports had been appearing in literature under various headings from 1920 onwards. Disorders were variously described as 'malignant malnutrition', 'infantile pellagra', 'war oedema', 'famine hypoproteinaemia', and some forty other terms. Many of these, surely included cases of kwashiorkor.

Definition—The disease is characterised by a failure of growth in children, reddish pigmentation of the hair and skin, complex gastro-intestinal symptoms, a peculiar dermatosis, and mental irritability and apathy, oedema and a very high mortality in untreated oedematous cases.

Geographical distribution—The disease is widespread throughout the tropical and subtropical parts of Africa, Asia and America. In Europe and North America the disease is rare. But cases have been observed among the poorer children of large towns in France, Spain, Italy, Greece, Germany and during World war II among the besieged children of Budapest (Hungary), when milk was unavailable. In India, Achar *et al* (1956) described the syndrome in detail and opined that it was quite common and atributable predominantly to protein deficiency though manifestations of vitamin A deficiency might be found in addition.

AETIOLOGY

Most infants grow well during the first five to six months of life, when the supply of breast milk is adequate for their needs. They are alert and lively. Their skin and hair are healthy. Difficulty arises at the time of weaning, or when breast milk fails. It is a disease most rampant in the poor stratum of the society, where poverty, maternal ignorance and apathy play a great part in its causation. When the substitutes for breast milk that are used, fail to supply adequate nourishment digestive upsets result.

Thus somewhere between the sixth to the twelfth month, growth in the majority of children ceases to be satisfactory, the skin becomes pale, the hair becomes brownish and soft, they have frequent attacks of diarrhoea and many of them are mentally retarded, or at least apathetic. They suffer from malnutrition, due mainly to an insufficiency of protein. They are the picture of mild cases of kwashiorkor. The majority of cases appear to suffer only slightly from the disease.

The heavy demand for the protein factor that is urgently required at this period of a child's growth is inadequate for the mother herself is in a poor state of health and a faulty nutritional status. Even when not weaned, the child gets much less than is required for healthy growth.

These cases are so common specially in certain regions of Africa that they scarcely attract notice

† Based on a paper read before the Nabadwip branch of the Indian Medical Association, July, 1956.

of anybody, and people accept the condition as a normal phase of health in the development of the child. Its universality hindered recognition of the disease so far. As the aetiology became more and more clear and the clinical and pathological features were defined, the importance and severity of kwashiorkor became only too apparent. The special nature of the malnutrition of children in the tropics, being due to a shortage of protein is a recent conception, and kwashiorkor has been linked with this conception.

Clinical Picture

It is expected that the Nutrition Research Laboratories, Coonoor, and the Indian Council of Medical Research, would soon be able to present a detailed account of the manifestations of the disease in India. A sort of preliminary account shows 30 per cent of nutritional disorders are contributed by the disease, and it forms 10 per cent of admissions in the pediatric department.

All cases of severe kwashiorkor first pass through the mild stage. It is the severe case that attracts notice, and the term is rather restricted to the severe form of the disease by those who only recognise the characteristic full blown picture of it.

The transition from the mild to the severe form is usually recognised by the appearance of persistent or intermittent diarrhoea. Fats and sugars are poorly tolerated. The appetite, at first good or fastidious, is lost in the later stages of all severe cases. The victims are under-weight for their age inspite of the presence of oedema, a constant feature of all advanced cases. Ascites is very rare. The vitality, temperature, and blood pressure tend to be subnormal. The temperature may not rise even in the presence of an infection. The heart is usually not affected. The liver may or may not be enlarged. Except for a trace of albumin in the urine, no other abnormalities are present. As superimposed complications, malaria, intestinal infestations, infections of the lungs and intestines, surgical septic conditions, angular stomatitis, cheilosis, cancrum oris, and dermatoses may arise. One form of characteristic dermatosis is the black 'crazy-pavement' dermatosis. This eruption occurs as black varnished sharply defined patches on the areas exposed to irritation (inguinal region, the napkin area, axillae, thighs, chest and shoulders) but not on the areas exposed to sun light, (face, neck, arms, lower parts of legs and feet) thus differentiating it from pellagra. These black patches rapidly enlarge, tend to coalesce, and then peel off to disclose a white or pink area. This together with the stomatitis tends to improve rapidly with the administration of nicotinic acid. But the vitamins of the B group do not really improve the general condition of the patient and rather tend to do harm. The fully developed dermatosis is a serious sign, occurring in children who are approaching death. There are other skin changes, such as pallor, generalised, localised or in scattered patches, deep bleeding fissures in the flexures or junctures, deep circular ulcers with a grey slough and edge without reactionary inflammation. These never appear to be painful.

The hair loses its lustre and curls, becomes pale, almost flaxen, or reddish, thin and soft. The fine downy hairs of the body, become reddish, and easily attract notice against the dark skin.

Mental apathy is deep and there is no alertness. The child takes no interest in what is happening, but resists, however feebly, any interference or examination by the doctor. One gets the impression that the child is in a miserable condition.

Diagnosis

The fully developed picture of the disease is characteristic. In general undernutrition associated with oedema, alterations of the colour of the hair and skin do not occur and there is much loss of subcutaneous fat. In hookworm infection, the anaemia is severe and the skin is pale, not bronze-like. In sub-acute nephritis, the urine will contain a greater amount of albumin, and the oedema is refractory to treatment.

Treatment

As it is a protein deficiency disease treatment should aim at supplying large amounts of protein, preferably that of milk, in a form that can be easily assimilated by the weak digestive system of the child. There is much difficulty, when anorexia or vomiting or uncontrollable diarrhoea is present. Any secondary complication or infection even if it appears trivial should be treated for the child has no stamina left to combat any infection which works on without producing a reaction, thus bringing on unexpected and rapid death. Vitamins do no good, on the contrary produce embarrassment, and should be avoided.

Although milk should be the mainstay, other animal proteins may also be tried. But these are not always within the means of the poor family.

Soyabeans are an excellent source of plant protein and a cheap and effective substitute. Bananas both the green cooking and the ripe varieties have been tried to replenish carbohydrates.

Concentrated protein preparations may be advantageously used as an adjunct. The diarrhoea can sometimes be controlled by diminishing the sugar and other carbohydrate portions of the diet. Mashed sweet banana and cooked green banana are equally good, but the banana is a poor source of vegetable protein, 100 g. containing less than 1·5 g. protein. Banana with soyabean will be a good combination. Soyabeans may be prepared in the following way: The beans are soaked overnight. In the morning the husks are removed by rubbing. Then the beans are ground to a paste which is diluted with water. The prepared liquid may be called 'Soya-Milk'. This may be cooked in a water bath, and then raised to the boil for about twenty minutes. This may be used with cane sugar (sucrose) or with sweet banana. The fat contained in the soya emulsion, as prepared above is better tolerated than full cream milk. With the progress of the case a little milk can be added to the above.

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CASE NOTES

PAPILLOMA OF THE GALLBLADDER

H. ROY, M.B.B.S., A. C. GUHA, M.B., D.B. (MANCH.),

AND

S. M. GHOSE, M.B., F.R.C.S. (ENG.),

Department of Pathology and Surgery, National Medical College, Calcutta.

True papilloma of the gallbladder is a rare condition. Table 1 depicts the incidence of papilloma of the gallbladder.

TABLE 1—SHOWING THE INCIDENCE OF PAPILLOMA OF THE GALLBLADDER

Author	No. of cases	Total No. of gallbladders examined	Percentage of incidence
Mayo (1915) ...	—	2538	4·2
Irwin & MacCarty (1915)	85	2168	3·9
Abel (1923) ...	8	288	2·8
Kirklin (1931) ...	—	17000	8·5
Crump (1931) ...	78	1000	7·5
Phillips (1933) ...	9	500	1·8
Wellbrock (1934) ...	69	9550	0·7
Adams & Stranaham (1947) ...	1	1036	0·1
Kane, Brown and Hoerr (1952) ...	8	2000	0·4

During the period, March 1955 to March 1956, 40 cholecystectomy specimens were received in the Department of Pathology, National Medical College, Calcutta, among which only one case of true benign papilloma of the gallbladder was met with.

CASE REPORT

P. C. O., 24 years, Hindu male, came to the National Medical College Hospitals in October, 1955 with the complaint of occasional attacks of severe pain in the right hypochondrium persisting for a few hours, for the last six years. Attack of pain was associated with vomiting. The pain had no relation to food and it radiated to the right side of the back. The patient noticed a lump in the right hypochondriac region about four years ago which gradually increased up to the present size. He also suffered from flatulent dyspepsia for about four years. There was rise of temperature with the pain.

On examination a big smooth pyriform swelling was found extending from beneath the right costal margin down to the right iliac fossa. The swelling was tender, firm in feel and moved with respiration. There was no jaundice. A diagnosis of empyema of the gallbladdar was made and immediate removal was advised.

On opening the abdomen the gall-bladder was found to be hugely distended and congested. The cystic duct showed some adhesion but not distension. The common bile duct appeared to be normal. Twenty ounces of seropurulent fluid was drained from the gallbladder and the viscus was removed. The patient stood the operation well and made an uneventful recovery.

THE SPECIMEN:

Gross description—The gallbladder formed an elongated sac, 17 cm. from fundus to neck and about 12 cm. in maximum circumference, the fundus being somewhat narrow. The external surface was smooth and congested. There was some omental adhesion at places, on the posterior surface, near the middle of the specimen. On opening the gallbladder a papillomatous growth 4 cm. in length was found hanging from the neck of the gallbladder (Fig. 1). The tumour was fleshy in colour, consisting of plenty of delicate tendril like processes, all of which were first joined together and then connected to the gallbladder wall with a single narrow stalk.

The wall of the gallbladder was thickened. Irregular patchy thickening of the mucosa, bluish white in colour was found to be limited mainly to the distal two-thirds of the fundus. In addition to the papillomatous growth the gallbladder contained

some shreds of mucus, inspissated pus and some loose polypoid material similar to that in the neck, probably detached portion from the growth of the neck. No stones were present in the gallbladder.

FIG. 1—PHOTOGRAPH OF THE SPECIMEN OF GALLBLADDER SHOWING A SINGLE VILLUS PAPILLOMA IN THE NECK.

Histological features—The tumour consisted of a delicate vascular connective tissue core greatly branched and expanded into numerous processes all of which were covered by mucous membrane of simple or complex glandular type. They were attached to the gall-bladder by a single narrow stalk. Blood vessels were plenty and thin walled. Repeated branching of the stalk produced complex pattern of the papilloma (Fig. 2, *vide* Plate). Infiltration of inflammatory cells; mainly lymphocytes and plasma cells were found in certain parts of the tumour. Epithelium of the tumour in general was cubical and columnar in type. The nuclei were elongated or oval and basal in position. The cytoplasm was faintly stained. No mitotic figures were found and no evidence of malignancy could be seen at any place. Delicate connective tissue core contained some reticulin fibres which were also in continuity with the reticulin fibres of the vessel wall (Fig. 3, *vide* Plate).

Most of the lining cells as well as the secretions in the acini were strongly PAS positive.

Several sections were taken from different parts of the gallbladder for histological study. The serous coat was ill-defined. The muscle coat was thickened, oedematous and infiltrated with inflammatory cells mainly lymphocytes and a few plasma cells. At places there were collections of inflammatory cells near about the congested blood vessels. All throughout the muscle coat the blood vessels were greatly increased in number and congested. Extensive extravasation of blood was seen in the submucous and muscle coat. The internal surface of the gallbladder, particularly the thickened patchy areas showed complete disappearance of the mucous membrane. The wavy outline of the mucous membrane was maintained by a thick band of collagen tissue with no remnants of epithelium (Fig. 4, *vide* Plate). Intact mucosa could be found near about the neck of the gall-bladder. Penetration of the normal epithelium deep into the underlying tissue known as cholecystitis glandularis proliferans was not found at any place.

Paneth's cells, enterochromaffin cells and goblet cells were absent and there was nothing to suggest the origin in the heterotrophic intestinal epithelium.

The tumour was diagnosed as a benign villus papilloma of the gall-bladder.

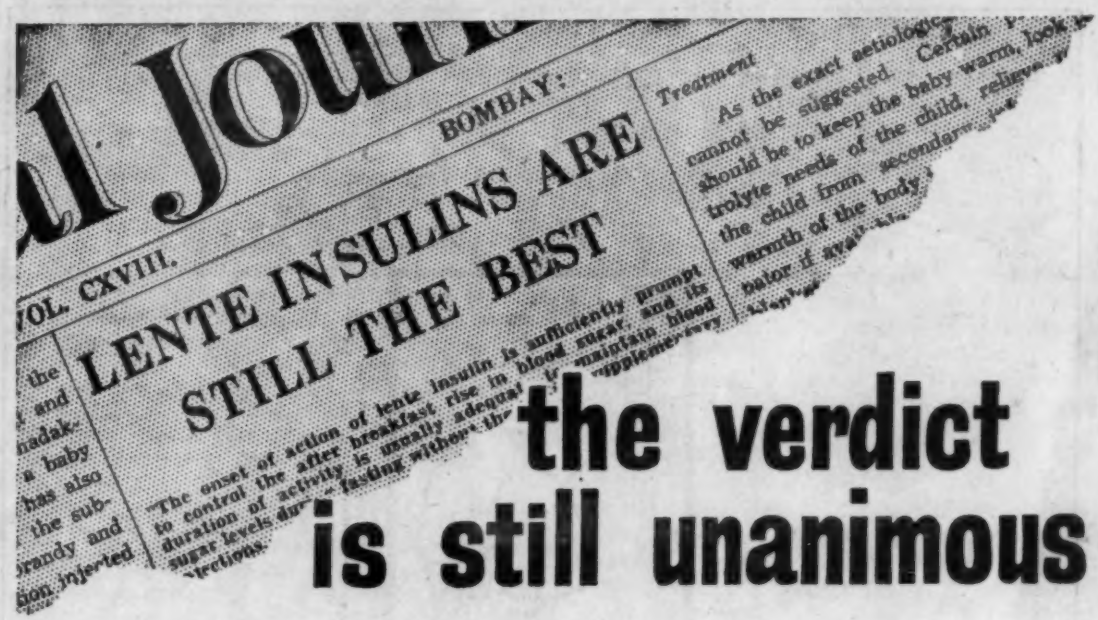
COMMENT

The gallbladder of the case under discussion was so much enlarged that the patient complained of a gradually increasing lump in the right hypochondriac region and on examination a tender, firm and pyriform swelling could be palpated extending from beneath the right costal margin down to the right iliac fossa. According to Kane, Brown and Hoerr (1952) papilloma of the gallbladder which is greatly enlarged to be palpable clinically is extremely rare. Kerr and Lendrum (1936) reported one case and Brown and Cappell (1937) another case with similarly palpable gallbladder.

Kirklin (1931) was the first to claim that cholecystogram often enables to give preoperative diagnosis with considerable accuracy. Marginal filling defect which is persistently present in the same position irrespective of the posture of the patient is said to be the characteristic of the papilloma. This is best seen in twenty-four hours film. Three out of eight cases reported by Kane, Brown and Hoerr (1952) were diagnosed before operation by this method. The case of Griffiths (1956) however could not be diagnosed due to the obstruction of the cystic duct by the growth resulting in non-filling of the gallbladder in repeated cholecystograms. No special examinations are thought necessary in the present case, as the diagnosis of empyema of the gallbladder was made and immediate removal was advised.

Unfortunately, no chemical or bacteriological examination of the fluid could be done. The wall of the gallbladder was congested and thickened with adhesion of the omentum at places. The size of the gall-bladder was unusually large. The long axis measured after removal was found to be 17 cm. and it contained 20 ounces of fluid. The size of the gall-bladder in Kerr and Lendrum's (1936) case was 16·5 cm. in its long axis and contained 30 ouncecs of clear watery fluid. In 18,000 cholecystectomies, Judd and Castleton (1933) recorded only 35 cases with long axis greater than 15 cm. and the largest they recorded was 20 cm.

Large papillomas are rare and are usually single whereas multiple ones are smaller in size. According to Walters and Snell (1940) 60 per cent of the smaller papillomas are multiple. Two cases in the series of Shepard, Walters and Dockerty (1942) showed small papillomas so great in number that they described them as papillomatosis. The single papilloma in Kerr and Lendrum's (1936) case was 3 cm. long. The case under



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discussion shows unusually long single villus papilloma, the size being 4 cm. in length.

Most of the reported cases show some associated pathological condition of the gallbladder such as cholecystitis, cholelithiasis or cholesterosis. Brown and Coppel's (1937) case had chronic inflammatory changes in the gall-bladder along with about 300 infective stones. Kerr and Lendrum's (1936) case had signs of chronic inflammation but no stone. In Kane, Brown and Hoerr's (1952) series of eight cases, cholesterosis was found in one, stone in three and only chronic cholecystitis without any stone in two cases. In the series of Wellbrock (1934), 38 out of 65 cases had cholelithiasis. Sand and Mayer quoted by Bockus (1946) found associated stone in 7 out of 8 cases. In the present case there was inflammatory changes all throughout the gallbladder.

Summary

A case of papilloma of the gallbladder is reported with clinical and pathological features and pertinent literature reviewed.

Acknowledgments

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UNUSUAL FOREIGN BODY IN THE NOSE

S. K. SENGUPTA, M.B., D.L.O. (LOND.),

Professor of Otorhinolaryngology,
R. G. Kar Medical College, Calcutta

History—A 18 year old young healthy girl noticed a sore with a little pain in the right nasal cavity about 3 years ago. Nasal wash with any antiseptic lotion, or application of some ointment caused some temporary improvement. She also complained of offensive odour and epistaxis occasionally. There was also dull pain in the right nasal cavity. Past history, family history and personal history were not significant.

On examination—The left nasal cavity was found to be normal. There was an ulcer with granulation tissue on the floor of the right nasal cavity. The ulcerated area was oblong and small. The other parts of the nasal cavity were normal. The appearance of the nasal cavity did not give any evidence of its being a case of atrophic rhinitis. It was thought to be a growth of granulation tissue round a sequestrum in the floor of the nose.

Examination of other systems—normal.

Laboratory investigations—W.R. and Kahn tests were done on more than one occasion but every time the result was negative. Results of blood examination for total and differential counts, bleeding and coagulation time were all within normal limits. Urine—normal.

X-ray report of the nose and the neighbouring parts—"An opacity of about ½" × ¼" on the floor of the right nasal cavity. The mucous membrane of the right nasal cavity thickened, other parts normal".

Treatment—Under general anaesthesia, the area of ulceration was explored—and a hard smooth substance could be felt. It was found to be a tooth which was lying deep in the bony tissue of the floor of the nose lengthwise. It was extracted with the help of a tooth forceps, the nose was plugged, and the plug removed next day. The patient was discharged in perfectly normal condition on the 10th day of operation.

Summary

1. It is interesting to note how a tooth could get its way in the bony tissue of the floor of the nose.
2. The patient did not give any history of trauma.
3. At the time of operation, it was noticed that in the right upper jaw there was a gap in the gum in the place of the lateral incisor which was missing.
4. X-ray report was suggestive of a foreign body of dense opacity.

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PUBLIC HEALTH AND MEDICAL PRACTICE

The different stages through which scientific medical thought has broadly emerged in the recent past are: demonistic, supernatural, deistic and finally natural origin of disease; knowledge of anatomy and physiology; clinical differentiation of disease entities; knowledge of the tissue changes (pathology) in different diseases; environment playing a major role in the causation and propagation of diseases; germs as causative factors; vectors and reserviors of infection; immunity and immunological procedures; vital statistics; public health; social, preventive and promotive medicine. The stage in the near future will perhaps be comprehensive medicine. Similarly in the matter of treatment also, drug therapy was followed by chemotherapy, serotherapy, organotherapy, physiotherapy, radiotherapy, antibiotics and new application of radio-isotopes, and so with each branch of medical science. But the development of each stage was only the logical outcome of its preceding stage and was fully dependent upon it.

Not very long ago medical practice was mostly concerned with individuals as patients. Now it has a wider application not only on the individual and his family but also on the community as a whole. There has been a gradual transition from individual's own responsibility for the care of illness to that of the state and now not only is man considered in his total entirety but his environment is also included. In other words, man and his environment are the concern of modern medicine. The principle is—"Promote health, failing which prevent disease, failing which treat it." The last is, however, the only principle which is followed as a rule by the general medical practitioners.

Health is the concern of both the people and the Government and thus the word 'public health' has come to be used. As with the evolution of knowledge so with public health; its meaning and scope have changed at different stages. It originally came to mean sanitation of the environment, later with the knowledge of microbic origin of disease and its communicable nature and other socio-geographical factors, control of communicable diseases, treatment of patients and raising of specific resistance of human subjects were included; now socio-economic and psychological aspects are also being stressed. Disease is not merely an infection or some internal derangement, it arises out of interaction of environmental (physical, chemical), biological, physiological, psychological and socio-geographical conditions upon man and the community. Thus public health in its wider meaning involves promotive, preventive and curative aspects of medicine. Conversely, health is not an isolated entity but is dependent upon food, shelter, racial, hereditary and socio-economic conditions, mental peace, climatic and other environmental factors. Likewise, the improvement of health is dependent upon simultaneous improvement of all these conditions. The Community Project Development and the Health Centre Schemes are only the natural outcome of the knowledge that mankind has gained through the past centuries.

In the above context, there is no scope for compartmentalism in the care of health. Every aspect as stated above is complementary to one another and part of the whole. Similarly, modern medicine can perhaps be fully expressed by the term "comprehensive medicine" of which social and preventive medicine will be an important part. Only in the matter of translating them into actual practice and for the sake of convenience that differentiation is made into curative, preventive and promotive medicine, while in the matter of service the whole has been designated as "public health". We may have specialisation in every branch of comprehensive medicine just as we have specialisation in clinical practice, e.g., physicians, surgeons, gynaecologists, ophthalmologists and so on. Under comprehensive medicine these specialisations will be subclassed under clinical practice and the other branches will be health administration, sanitary engineering, maternity and child welfare, health education, epidemiology, vital statistics, public health nursing, health visiting, sanitation, industrial health, school health, public health laboratory practice, pharmacy, medical social work and so on. These specialisations will be for efficient service and not merely for efficient practice as originally meant for.

Now the question is how can the specific opportunities for preventing disease and promoting health be exploited in medical practice in which the doctor is busy with the urgent needs of his patients?

The point, however, is that in the actual field it is difficult to envisage a medical practice wholly devoid of preventive activities, whether the practitioner himself realises it or not. For instance, if he treats a case of diabetes successfully he may be preventing tuberculosis or glaucoma and his surgical repair of a hernia may prevent an acute intestinal obstruction. In fact, the practising doctor is a key member of an enormous team of health personnel, playing his part in the team, and as such he can perform numerous preventive service.

In the sphere of health promotion of the individuals the practising doctor may advise his patients on their general nutrition, their need for rest, recreation and exercise and other approaches to positive health. In the sphere of specific preventive measures he can give immunisations, or prescribe vitamin supplements or the like. In the sphere of early recognition and prompt treatment of disease, he can help his patients to get rid of it quickly and prevent its spread. He has also the opportunity to prevent disability or death in those coming in the advanced stage of disease, and finally, he may advise on rehabilitation of the disabled patients.

These opportunities are found as much in community practice as with the individual patients. For instance, if the patient is suffering from an infectious or communicable disease, such as typhoid, diphtheria, tuberculosis, venereal disease and so on, the practising physician can point out the danger of its spread to other members of the family and also the community, advise the patient on how he should avoid it, and immunise others against the infection. Similarly when a child is referred to a school medical officer by a nurse or school teacher for any specific problem, e.g., enlarged tonsils, poor vision, impaired hearing, postural defect, skin eruption, behaviour problem, etc., —which has apparently not been of sufficient moment in the life of the family to induce it to take the child to a doctor, the latter has enormous opportunities to do preventive services. Again, the worker referred to him by the factory because he is easily fatigued or prone to too many minor accidents is likewise a preventive challenge. Serious difficulties might be ahead, and it is the duty of the physician who takes charge of the patient to tackle these problems diligently.

Apart from the conditions mentioned above an individual in a modern community may consult a doctor for a great variety of purposes namely, the adult applying for a life insurance policy, the employee seeking a job, the pilgrim going to a religious congregation, the child going to a camp, and others may want a complete health examination and check-up. Very often the busy practitioner looks upon these as nuisance calls. If the doctor makes only a cursory inspection merely sufficient to enable him to fill out a printed form, both the doctor and the parties may lose the preventive opportunities. On the other hand, a careful doctor may find unsuspected conditions, apart from the cause of the patient's present symptoms or even though he may be apparently healthy. Here is the particular advantage of the general practitioner compared with the specialist who sees only from his narrow field and, that also, generally after the patient is referred to him by the general practitioner.

In the field of maternity and child welfare the physician is already engaged in preventive practice in a large measure with antenatal, natal and postnatal cares. Similarly, periodic health examinations are another procedure where the medical practitioner can play a major role in preventive medicine, particularly with increasing cardiovascular diseases and incidence of cancer. Early diagnosis in such cases will be of immense benefit not only to the patients but the community as a whole.

Another problem to which the country's attention has been recently directed is the question of control of population. In this sphere also, private practitioners can take a very important part of imparting necessary advice to the parents regarding birth control.

The modern slogan "seeing the patient as a whole" will remain only a lip service if the medical practitioner does not put meaning into it by looking upon each case of say, respiratory disease, abdominal discomfort and what not as an entree to an exploration of the total health of the patient. This will take time but the rewards in future health will be great. It can now be well envisaged that the future of medical practice will be to keep people healthy and the care of the sick will come only as a subsidiary responsibility, and public health will be designed to take care of the individual from birth throughout childhood and adolescence to maturity and old age.

Under the circumstances stated, the Government of India and all State Governments will naturally have to prepare and revise their future health plans in this context.

CURRENT MEDICAL LITERATURE

Acute Coronary Insufficiency

MASTER AND OTHERS (*Ann. Int. Med.*, **45** : 561, 1956) give in the following lines the summary of their observations on acute coronary insufficiency :

Acute coronary insufficiency represents a sudden transitory inadequacy of the coronary circulation for the requirements of the myocardium. It may occur spontaneously or be induced by factors which increase the work of the heart, decrease the coronary flow, or alter the composition of the blood. Usually a combination of these factors exists.

Acute coronary insufficiency is a specific clinical, electrocardiographic and pathologic entity, differing from both angina pectoris and acute coronary occlusion. It indicates a more prolonged and severe myocardial ischaemia than does "angina", yet does not present the characteristic electrocardiographic and laboratory features of major infarction secondary to coronary occlusion. There is no change in the heart sounds; there is no pericardial rub, heart failure or peripheral embolization. In coronary insufficiency, mild fever, slight leukocytosis and a slight increase in sedimentation rate may appear, if significant subendocardial necrosis results. At postmortem, no acute thrombus is present in the coronary arteries.

Acute coronary insufficiency is more common than acute coronary occlusion, but may be so mild as to escape recognition. It can develop spontaneously. Often, however, it follows severe haemorrhage, tachycardia, marked physical exertion, emotional upset, trauma (surgical or accidental), sudden hypertension, shock, pulmonary embolism and infarction, severe infections and heart failure. Such cases should be termed "acute coronary insufficiency" secondary to whatever the causative condition may be. Prompt and effective treatment of the precipitating factor may terminate the resultant coronary insufficiency and may even prevent it. In acute haemorrhage, replacement of blood may be life-saving, as are vasopressor drugs in shock and hypotension. The termination of severe tachycardia is also vital. The presence of a precipitating factor in a coronary episode suggests the presence of coronary insufficiency, rather than occlusion. When coronary insufficiency occurs spontaneously, it may clinically resemble coronary occlusion with mild manifestations. However, the electrocardiographic picture usually serves to distinguish them. Coronary insufficiency may very occasionally cause sudden death; but when the patient survives the onset, the prognosis is better than that following occlusion.

The treatment of coronary insufficiency and coronary occlusion differs, hence the recognition of the former as an entity is essential. In uncomplicated coronary insufficiency, we have employed chair rest or merely house confinement for a period of usually only one to two weeks, avoiding protracted immobilization with the accompanying hazards of peripheral thrombosis commonly seen in older persons. Most patients make a complete recovery and resume work within several weeks. Mural thrombi do not occur in coronary insufficiency, hence anticoagulants need not be administered.

While more than two thirds of the attacks of coronary insufficiency follow a benign course, others are more prolonged and severe and may persist for several weeks or months. An attack of coronary insufficiency may represent the "premonitory phase" of coronary occlusion. Anticoagulant drugs have been recommended in this premonitory or impending phase of acute coronary occlusion but, in our experience, have not prevented the final occlusion.

The term "myocardial infarction" used alone is ambiguous and confuses nomenclature and treatment. If employed, it should be modified, so that the terminology is "myocardial infarction secondary to acute coronary insufficiency" or "myocardial infarction secondary to acute coronary occlusion."

Acute coronary insufficiency, as we have defined it is a distinct entity with predisposing and precipitating factors, a definite physiopathologic mechanism, characteristic location of the ischaemia or necrosis in the subendocardium, and a more or less characteristic electrocardiogram.

Because acute coronary insufficiency can be prevented in the vast majority of instances, and can usually be cured, its clinical recognition and its differential diagnosis from coronary occlusion are essential for definitive treatment.

Tall Upright T Waves in Chest Leads

FREUNDLICH (*Am. Heart J.*, **52** : 749, 1956) gives in the following lines the summary of his observations on the diagnostic significance of tall upright T waves in the chest leads :

One hundred and ten patients with recurrent anginal attacks are reported who displayed very high T waves in the chest leads as the only electrocardiographic abnormality.

On the basis of the clinical as well as of the postmortem findings four groups of patients were distinguished.

In the first group which included seventeen patients (15·3 per cent) the high T waves preceded the development of the characteristic signs of myocardial infarction.

The second group included thirty-three patients (30 per cent) who had a history of a previous coronary occlusion and the old electrocardiogram displayed signs of infarction. The high T waves persisted in this group up to seven years.

The third group included six patients (5·4 per cent) who had a severe aortic stenosis due to an old rheumatic endocarditis.

In the fourth group of fifty-four patients (49 per cent) the high T waves have persisted and the patients are still under observation. The only change observed in this group was a marked decrease in the amplitude of T in five patients during prolonged rest.

The association of the high T waves with frequent anginal attacks on exertion and the large number (50·7 per cent) of patients in which myocardial damage was proved in follow-up studies point to the pathologic significance of the high T waves.

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Constrictive Pericarditis

DALTON AND OTHERS (*Ann. Int. Med.*, **45** : 445, 1956) in giving a clinical review and long-term follow-up of 78 cases of constrictive pericarditis observe :

Forty-two patients who have been operated upon are still living. Six have been followed for over 20 years, 10 for over 10 years, and 11 for over five years. All of the patients followed over 20 years are living normal, unrestricted lives.

Operative results have been classified and operative mortality has been calculated on initial and later operations. The majority of patients who are symptom-free postoperatively show some abnormal physical signs. The clinical features of the patients classified as showing excellent results, fair results and failures have been compared.

Several interesting features have been noted :

(a) Dyspnoea, ankle oedema and abdominal swelling are the most frequent complaints. Neck vein distension and hepatomegaly were the most frequent physical findings.

(b) A systolic blood pressure above 130 mm. Hg. was found in only one patient preoperatively, whereas wide pulse pressures were not rare (greater than 50 mm. Hg. in 9 per cent of cases). Systolic blood pressures commonly rose postoperatively, but no patient became seriously hypertensive.

(c) Cardiac enlargement was present in one-half the cases. Cardiac pulsations were diminished in four-fifths of the cases but were fluoroscopically normal in the other fifth.

(d) Abnormal electrocardiograms were present in every case. The T waves were abnormal in 100 per cent of the cases. The P waves were abnormal in 72 per cent of those cases with normal rhythm. Atrial arrhythmias were common, having been found in 34 of the 78 cases; fibrillation was identified in 27, being constant in 19, while flutter occurred in three, two of which changed to fibrillation.

(e) Calcification was noted in the pericardium in 60 per cent of the cases.

E.C.G. in Mitral Stenosis

SHAH AND DESAI (*Indian Heart J.*, **8** : 50, 1956) give in the following lines the summary of their observations on the electrocardiographic study in 67 cases of predominant mitral stenosis and on the cardiac catheterisation study in 10 cases :

22 per cent showed normal E.C.G. 15 per cent showed auricular hypertrophy. 63 per cent showed auricular and right ventricular hypertrophy. Increased duration or widening of P wave in L_2 was a common finding. Increase in amplitude was found in L_1, L_2 and V_2, but more frequently in L_2. Broad flat-topped type of P wave either in L_1 or L_2 was very common, one-third of them showing notching. Sharp and tall P wave, though less common, was met with in L_2 in 19 per cent of cases. Right axis deviation and rRR pattern in bipolar limb leads and vertical position were frequent.

Right ventricular hypertrophy was found in 63 per cent of cases. Commonest finding was tall R wave (greater than 7 mm.) in V_1. Majority of cases showed ST-T depression and inverted T wave in V_1, V_2 and L_1, L_2 but were always associated with tall R wave. Cardiograms showing progressive changes from early to full-fledged pattern of right ventricular hypertrophy are shown.

Considerable pulmonary hypertension on cardiac catheterisation exists when there are E.C.G. changes of right ventricular hypertrophy. E.C.G. may not show right ventricular hypertrophy even though pulmonary hypertension is present. Most of the cases in this series showing pulmonary hypertension had electrocardiographic signs of right ventricular hypertrophy.

Salicylates vs. Oral Cortisone in the Control of Rheumatic Activity

ROY (*Indian Heart J.*, **8** : 65, 1956) from an analysis of the study on the evaluation of salicylates and oral cortisone therapy in the control of rheumatic activity observes :

Salicylates and oral cortisone therapy are almost equally effective in controlling rheumatic activity. This control is of the nature of a suppression rather than eradication, as the activity tends to relapse after the cessation of treatment. In the treatment of acute polyarthritis or of recrudescent activity during the course of chronic valvular damage, salicylates usually suffice. Rarely cortisone therapy may be required in addition. The cost of cortisone therapy is at present too prohibitive for the routine use of cortisone in acute polyarthritis.

In cases of acute carditis, it appears that cortisone therapy is somewhat superior to salicylate therapy. In cases with mild or moderate carditis, this superiority was not marked but in cases with cardiac failure this was obvious. In the salicylate series, out of 8 cases only 2 survived at the end of 2 weeks and in the cortisone series out of 10 cases 5 survived. Sodium restriction and mercurial diuretics were resorted to in both the series and digitalis therapy was given only to the salicylate series. The number of cases and the period of observation have so far been too limited to permit any conclusion in regard to the ultimate value of cortisone in acute carditis. Both salicylates and cortisone have little influence on the chronic valvular damage. Whether they can prevent valvular lesions, when administered early in the course of acute carditis, cannot be stated at present.

Coronary Heart Disease in Low Income Population in India

SAMANA (*Indian Heart J.*, **8** : 104, 1956) from the analysis of a study of 252 cases of coronary heart disease at Sir J. J. Group of Hospitals and Grant Medical College, Bombay out of a total of 37,896 cases admitted on medical side during the five-year period (1949-53) observes :

2,081 cases of organic heart disease were sorted out as total cardiovascular diseases.

These 2,081 cases of cardiovascular diseases were further subjected to aetiological grouping on the basis of W.H.O. International Statistical classification.

Of these 2,081 cases of total cardiovascular diseases, 252 belonged to the group coronary heart disease forming 12·1 per cent of total cardiovascular disease and 0·66 per cent of total medical in-patients.

Of these 252 cases of coronary heart disease, 208 (82·5 per cent) belonged to the group of myocardial infarction, 38 (15·1 per cent) to that of myocardial ischaemia (angina pectoris) and 6 (2·4 per cent) to coronary insufficiency and others.

Of this total of 252 cases, 230 (91·3 per cent) were males and 22 (8·7 per cent) females.

In a total of 252 cases of coronary heart disease the peak period was observed in the age group 41-50. 117 (46·4 per cent) were Muslims, 82 (32·5 per cent) Hindus, 38 (15 per cent) Christians and 15 (7·1 per cent) others. Muslims form the major portion, because the hospital is so situated that the majority attending this hospital are Muslims.

208 cases of myocardial infarction were further studied. Of these, 196 (94·2 per cent) were males and 12 (5·8 per cent) females. Peak period was observed to be the same (viz., 41-50 years) as for total coronary heart disease in general. Myocardial infarction in young adults (below the age of 40), was noted in 26·89 per cent of cases compared to a lesser number in the Western series. An explanation is offered for the same.

In all age groups males preponderated over females. Age group 41-50 shows "male to female ratio" at its highest, viz., 70 to 0. Of these 208 cases, there were Muslims 45·6 per cent, Hindus 32·7 per cent, Christians 16·3 per cent and others 5·4 per cent. Peak period 41·50 years was maintained in each individual community also.

Out of the total of 252 cases of coronary heart diseases treated, 95 (37·7 per cent) died. Of these, 83 (36 per cent) were males and 12 (54·5 per cent) females. According to clinical types, out of 208 cases of myocardial infarction there were 92 (44·2 per cent) deaths. Age group 41-50 years showed 25·3 per cent of a total of 95 deaths. Although the incidence is higher in males, the mortality rate is higher in females. Prognosis in peak period group is better than in other age groups. Deaths in males were 16 times more than those in females in age group 21-30 and 11 times more than females in the age group 41-50, although the number of deaths in relation to the number admitted (i.e., percentage mortality) is higer in females than in males. Mortality rate in young adults below the age of 40 was 56·2 per cent for coronary heart disease as a whole and 60·3 per cent for myocardial infarction. Minor communities have poorer prognosis compared to major ones. (*Author's summary*).

Glutamic Acid in Hepatic Coma

CHAIKIN AND OTHERS (*Am. J. Gastroenterol.*, **26**: 258, 1956) write that there is nothing specific about the biochemical abnormalities observed in hepatic coma. There is, however, some evidence pointing to disordered amino acid metabolism as a contributory factor in the pathogenesis of this syndrome. This particularly applies to glutamic acid metabolism in the various tissues, especially in the brain and spinal fluid, and the possible presence of methionine sulfoxide, which is a glutamic acid antimetabolite.

Glutamic acid is the only amino acid oxidized by the brain. It is deaminated to alpha-ketoglutaric acid which enters the Krebs cycle, thus associating glutamic acid to carbohydrate metabolism. It can also bind ammonia to form glutamine, which is then metabolized without liberation of ammonia.

Because of the important role that glutamic acid plays in both cerebral and hepatic metabolism, as well as its action upon the removal of excess ammonia, it was decided to try the effect of large doses of this amino acid in patients with either hepatic coma or impending coma.

The procedure adopted by the authors consisted of the following :

1. An initial dose of 25 g. of sodium glutamate was given intravenously, as an addition to 500 c.c. of 5 per cent glucose in distilled water.

2. If the patient failed to regain consciousness within a period of 4 to 6 hours, the first dose was repeated.

3. As soon as the patient regained consciousness, the intravenous glutamic acid (as sodium glutamate) was discontinued and 15 g. of glutamic acid given twice daily, either orally or by intragastric drip. This was continued until the mental status of the patient returned to normal.

4. The patient was placed on a low-protein, high carbohydrate diet.

In conclusion the authors observe that six patients with hepatic coma were treated with glutamic acid both intravenously and orally. All cases except that of viral hepatitis regained consciousness within 18 hours. The clearing of the mental state enabled the patients to take medication and nourishment by mouth and time was gained to treat the underlying disease.

Glutamic acid does not affect the course of the underlying disease nor the liver function tests. In two cases, the blood ammonia and pyruvic acid levels were decreased.

The authors maintain that further evaluation of the use of glutamic acid in hepatic coma is warranted.

Corticotropin and Corticoids in Patients with Liver Disease

SPELLBERG (*Am. J. Gastro-enterol.*, **26**: 342, 1956) writes that ACTH and the corticoids are useful therapeutic agents in the following types of liver disease : 1. protracted hepatitis with jaundice, 2. fulminating hepatitis, 3. hepatic coma, 4. posthepatic cholangiolitic cirrhosis, and 5. perhaps other types of biliary cirrhosis. It may be of limited value in certain phases of portal cirrhosis. It may have some limited value as a therapeutic test in differentiating between "medical" and "surgical" jaundice, the cause for errors are pointed out.

In one patient with posthepatitic cirrhosis the hormones were used for 18 months with abolition of jaun-

dice. The serum bilirubin could practically be titrated with steroids. No fatty liver developed in this patient.

In the treatment of severe hepatitis, chronic hepatitis, or cirrhosis the dosage of steroids is small or moderate. ACTH is preferred and if used intravenously only 20 or 40 units over an 8-hour period are sufficient. Intramuscular ACTH can be given as the gel in one dose or in solution in divided doses 40 to 100 units per day. Cortisone can be given orally 100 mg. in divided doses in 24 hours. Hydrocortisone 40 to 60 mg. orally may be utilized.

The authors have done blood determinations of plasma hydroxysteroids after oral administration of hydrocortisone in a jaundiced individual and found that the hormone is well absorbed even when there is deficiency of bile in the gastrointestinal tract.

The dosage in hepatic coma is much higher. ACTH is given intravenously, 100 units daily. Hydrocortisone intravenously is given in a dosage of 100 mg. or more daily. Although cortisone has been given in as much as 500 to 1,000 mg. daily, such large doses of hydrocortisone do not seem to be indicated.

The duration of therapy varies from a few days in hepatic coma to many months in posthepatitic cirrhosis. The steroids are gradually reduced; if a recrudescence of symptoms or signs occur the dosage has to be correspondingly increased.

Clinical Test for Diagnosis of Early Pregnancy

MATHEW (*Brit. M. J.*, **2**: 979, 1956) writes that a further step has been taken in investigating withdrawal bleeding following the administration of progesterone and oestrogen in women of child-bearing age complaining of short-term amenorrhoea. Parenteral administration used in the previous trial has now been succeeded by oral administration and the results observed in a series of 94 cases. When amenorrhoea was due to pregnancy no withdrawal bleeding occurred and no untoward effects upon the pregnancy were noted. In cases of non-pregnancy amenorrhoea withdrawal bleeding occurred within a varying period of time up to a maximum of 14 days. As a dosage reasonably comparable with the injected preparation, a total amount of 100 mg. of ethisterone and 0·5 mg. of ethinyloestradiol has been given over two consecutive days. This entailed the administration of five tablets ("orasecron") each containing 10 mg. of ethisterone and 0·05 mg. of ethinyloestradiol on each of the two days. The tablets were taken singly at three-hourly intervals and in this way caused no real upset, although a few patients complained of mild nausea. The oral administration of combined progesterone and oestrogen in the dosage prescribed would thus appear to constitute a reliable clinical method of diagnosing early pregnancy.

Postmaturity

KUNSTADTER AND SCHNITZ (*J. A. M. A.*, **161**: 1551, 1956) write that postmaturity, taken as meaning a gestational age of 294 days or more, occurred 247 times in a series of 2,877 deliveries. Gestational age exceeded 299 days in 132 of these babies.

The postmature group did not differ significantly, as to average weight and body length, from a group of 252 babies born after the 259th and before the 295th day. The postmature group did, however, include 11 infants with one or more clinical findings characteristic of a placental dysfunction syndrome: dry, scaling, parchment-like skin; staining of the skin and vernix caseosa; and poor tissue turgor, subcutaneous tissue wasting, or other evidence of recent weight loss. Four cases of this are described in some detail. In the full-term group, on the other hand, there was only one infant with any findings consistent with this picture.

Perinatal mortalities in these two groups did not differ significantly. The evidence indicated that postmature babies at birth must weigh, on the average, somewhat less than the maximum they attain before birth and that their intrauterine growth is limited by the functional capacities of the placenta.

Pitocin Drip

THEOBALD AND OTHERS (*J. Obst. & Gynaec. Brit. Emp.*, **63**: 641, 1957) give in the following lines the summary of their abstracts:

It is suggested that parturition occurs as the result of a more than hundredfold increase in the sensitivity of uterine muscle to oxytocin. This is normally effected over a period of days or hours at or about term, but may take place at any time during pregnancy.

Evidence has been adduced to show that inco-ordinate uterine action is due to excessive or irregular activity of the motor fibrils of the autonomic nerves supplying the uterus, and can be abolished by deep sedation. It may be necessary to use three separate narcotic drugs to achieve this purpose, for each acts on the central nervous system at a slightly different level.

Irregularity in the foetal heart is usually due to inco-ordinate uterine action which may occur early in labour. Foetal distress may be associated with maternal distress, but maternal distress can occur without any irregularity of the foetal heart. The treatment, unless immediate vaginal delivery is reasonably easy, is deep sedation.

The authors have reported the use of the triple procedure, which consists of low rupture of the membranes, deep sedation, and the pitocin drip. Each procedure is dependent on the other, and the first two decrease the number of occasions on which the third proves necessary.

Of 1,030 patients in whom labour was induced the pitocin drip was used in 222 of them (22 per cent), and all but 20 were delivered per vias naturales. Of 600 of uterine inertia the pitocin drip was used in 216 (36 per cent), and all but 9 were delivered vaginally.

The triple procedure makes it possible to reduce the incidence of caesarean section to the minimum.

The incidence of forceps deliveries was high, particularly in the inertia group. Fourteen of the patients in this group were delivered through an incompletely dilated cervix, but all the babies were born alive and went home.

Primigravidity, maternal age, and the weight of the infant (which includes the concept of cephalo-pelvic disproportion) play an important part, particularly in the inertia group, in determining the mode of delivery.

It is desirable to start the pitocin drip in a dilution of 1 :10,000 never in a concentration exceeding 1 :5,000. On no occasion should a concentration exceeding 1 :2,500 ever be employed, for the senaitivity of the uterine muscle to oxytocin may increase while the drip is being used.

If these precautions are strictly adhered to, the routine use of the pitocin drip is safe in all patients who are allowed to go into labour.

It is suggested that the hypothalamus is responsible for the onset of labour and parturition, and that noradrenaline causes inco-ordinate uterine activity.

CURRENT TOPIC

THE RESPONSIBILITIES OF THE MEDICAL PROFESSION IN THE USE OF X-RAYS AND OTHER IONIZING RADIATION†

I. Introduction

1. The United Nations General Assembly, being aware of the problems in public health that are created by the developments of atomic energy, established a Scientific Committee on the Effects of Atomic Radiation. This Committee has considered that one of its most urgent tasks was to collect as much information as possible on the amount of radiation to which man is exposed today, and on the effects of this radiation. Since it has become evident that radiation due to diagnostic radiology and to radio-therapy constitutes a substantial proportion of the total radiation received by the human race, the Committee considers it desirable to draw attention to information that has been obtained on this subject.

2. Modern medicine has contributed to the control of many diseases and has substantially prolonged the span of human life. These results have depended in part on the use of radiation in the detection, diagnosis and treatment of disease. There are, however, few examples of scientific progress that are not attended by some disadvantages, however slight. It is desirable therefore to review objectively the possible present or future consequences of increased irradiation of populations which result from these medical applications of radiation.

II. General Survey of the Irradiation of Human Beings

3. Man has always been exposed to some irradiation from natural sources. To this has now been added, as a result of modern discoveries and the applications of ionizing radiation and radioactivity, certain forms of artifical irradiation.

4. *Natural irradiation* is due to:

(1) Cosmic radiation,
(2) "Background" gamma radiation from radioactive substances present locally in the earth, rock or building materials, and from disintegration products of radon in air,
(3) Radiations emitted from natural radioelements such as potassium 40, radium, radon and carbon 14 which are incorporated in the body.

5. The amount of this natural radiation varies with locality, but has been estimated as usually delivering between 70 and 170 mrems per year to the gonads. Of this total, the major contributions are of about 45 per cent from local gramma radiations, 30 per cent from cosmic rays and 20 per cent from body potassium 40.[1]

6. *Artificial irradiation* is derived from:

(1) The contamination of the environment, the atmosphere, or water by radioactive waste from atomic industries or from users of radioelements;
(2) The radioactive fallout, at greater or lesser distances from the source, or radioactivity resulting from the explosion of nuclear devices;
(3) The occupational exposure of certain groups of workers: medical practitioners, radiologists, dentists, nurses, atomic energy workers, uranium or thorium miners, and the industrial or scientific users of radiation generators or radioactive isotopes;
(4) The medical use of x-rays, other ionizing radiations and radioelements in the detection, diagnosis, investigation and treatment of human diseases;
(5) The use of certain devices which emit radiation, such as television receivers, watches with luminous dials, and the x-rays generators used for the purpose of fitting shoes.

7. The amount of artificial radiation must vary considerably in different countries and we have inadequate information as to the over-all significance of these factors. In certain countries where estimates have been made, it appears that the greatest gonad irradiation of the population is due to diagnostic radiological procedures, the amount from this source about equalling that from all natural sources in certain instances. The total present contribution from occupational exposure, from the products of atomic industries from radiotherapy and from the radiating devices mentioned above (paragraph 6, sub-paragraph 5) is likely to be very considerably smaller. That from radioactive fallout to the gonads appears at present to be in the region of 1 per cent of the natural gonad irradiation in most areas.[2]

8. Both the magnitude and the significance of these various sources are under review by the Committee. Since medical irradiation accounts for a substantial if not the major proportion of all artificial exposure, it is important that its magnitude should be known accurately for different countries and circumstances. The

† Statement by the United Nations Scientific Committee on the Effects of Atomic Radiation.

[1] From reports sent by India, Sweden, the United Kingdom and the United States of America.

[2] According to the reports sent by the United Kingdom and the United States of America.

possibility of making such an assessment depends upon the help of the medical profession, and particularly on the adequacy and availability of records kept by doctors, dentists and organizations responsible for the use of ionizing radiation.

III. Radiation Hazards

9. The medical use of radiation is clearly of the utmost value in the prevention, diagnosis, investigation and treatment of human disease, but the possible effects of this irradiation of individuals require examination.

10. Generally speaking, the irradiation of living beings may produce radiobiological effects either on the irradiated individual himself or, through him, on his descendants; the former being termed somatic and the latter genetic effects. Somatic effects vary according to the different organs or tissues affected, and range from slight and reversible disturbances such as cutaneous erythema to the induction of leukaemia or of other malignant diseases. The possible reversibility of the somatic effects of radiation received in small doses or at low dose rates encourages the belief that there are permissible doses of radiation which will not cause completely irreversible or significant somatic damage. The threshold for occasional somatic damage may, however, prove to be low. In the case of genetic effects, on the other hand, there may be no threshold. These effects increase with a frequency corresponding to the total amount of radiation received by the germinal tissues, and in the great majority of cases, are adverse.

11. Many other factors complicate the interpretation of radiobiological effects. The differences between whole and partial body radiation, between a single exposure and continuous irradiation, or between the effects of different types of radiation are still imperfectly understood. Biological differences in the radiosensitivity of various tissues, or of the tissues of people of different age or sex, obviously influence the nature of radiation hazards. It is clear, however, that any radiation of gonads, and any substantial irradiation of other tissues, involve a chance of significant damage which requires assessment.

IV. General Recommendations Regarding the Medical and Occupational Irradiation of Human Beings

12. The Radiological Profession, through the International Commission on Radiological Protection,[3] has undertaken a valuable and responsible duty in defining maximum permissible limits of exposure for the main radiation hazards.

13. The establishment of these maximum permissible levels for those who are occupationally exposed to radiation depends on the view that there are doses which, in the light of our present knowledge, do not cause detectable somatic injury in the individual irradiated; and on the consideration that the number of individuals concerned is small enough for the genetic effects on the whole population to be negligible. For the gonads, or for irradiation of the whole body, the levels are such as to exclude doses greater than 0·3 rem in any week or 3·0 rem in any 13 weeks, or a sustained irradiation rate greater than 5 rem per year. These values imply that no total dose of over 50 rem will have been received by the gonads by the age of 30, or of over 200 rem by the whole body by the age of 60, in any occupationally exposed person.[4]

As regards irradiation of the whole population, it is considered prudent to limit the average dose to germinal tissues from artificial sources to the order of magnitude of that received from all natural sources.

14. In considering the extent to which the population is irradiated for medical purposes, it is essentially the genetic hazard which is involved although it seems possible that in certain circumstances somatic injury may occur occasionally after low doses of radiation arise. Otherwise, the relevant dose is that indicating the mean gonad irradiation among the population as a whole up to the end of the average reproductive period.

15. The extent of such genetic irradiation from diagnostic procedures has been found to be equal to at least 100 per cent of all natural radiation in two countries,[5]—and that from a third equalled at least 22 per cent of this figure.[6] Even before obtaining more exact values for these and other countries, it is clear that the exposure can be substantial in countries with extensive medical facilities, and that it is essential to consider any ways in which this exposure could be reduced without detriment to the existing or developing value of medical radiology.

16. The Committee is therefore anxious to obtain the help of radiologists in suggesting through appropriate governmental channels any methods by which this total exposure could be reduced and in estimating the amount of reduction that might be expected from any such methods. In particular it would be valuable to know how much the radiation to the gonads could be reduced.

(*a*) by improved design or shielding of equipment,

(*b*) by fuller training of any individuals using radiographic or fluoroscopic equipment,

(*c*) by any local shielding of the gonads that is practicable, especially during abdominal or pelvic examination,

(*d*) by the use of techniques involving radiography rather than fluoroscopy when full information can be obtained by this means,

(*e*) by improvement of administrative arrangements designed to obviate unnecessary repetition of identical examination of the same subject,

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[3] See the report of the International Commission on Radiological Protection, published in the *British Journal of Radiology*—Supplement 6, of December 1954, in the *Journal Francais d'electro-radiologie*—No. 10, of October 1955, etc.

[4] See the report of the International Commission on Radiological Protection, published in the *British Journal of Radiology*—Supplement 6, of December 1954, in the *Journal Francais d'electro-radiologie*—No. 10, of October 1955, etc.

[5] Sweden, United States of America.

[6] United Kingdom.

(*f*) by a general study of certain medical conditions such as that of peptic ulcers, to identify the circumstances in which the establishment of a radiological diagnosis has or has not a definite influence upon the treatment or prognosis given.

V. Summary

1. The Scientific Committee on the Effects of Atomic Radiation established by the United Nations General Assembly accepts the view that the irradiation of human beings, and especially of their germinal tissue, has certain undesirable effects.

2. Information received so far indicates that, in certain countries (Sweden, United Kingdom, United States of America), by far the most important artificial source of such irradiation is the use of radiological methods of diagnosis and that this may be equal in importance to radiation from all natural sources. It is possible that such radiation may be having a significant genetic effect on the population as a whole.

3. The Committee is fully aware of the importance and value of the medical use of radiations but wishes to draw the attention of the medical profession to these facts and to the need for a more accurate estimate of the amount of exposure from this source. The help of the medical profession would be most valuable to make it possible to obtain fuller information on this subject.

4. The Committee would be particularly grateful for information through appropriate governmental channels on ways in which the medical irradiation of the population can be reduced without diminishing the true value of radiology in diagnosis or treatment.

NOTES AND NEWS

World Conference on Medical Education

Doctors and medical educators of the world will be convened to consider the theme: *Medicine—A Life Long Study* at the Second World Conference on Medical Education scheduled for Chicago, Illinois, August 30—September 4, 1959. This Conference will be sponsored by The World Medical Association. Collaborating organizations include:

The World Health Organization; International Association of Universities; Council or International Organizations of Medical Sciences.

The Programme Committee under the Chairmanship of Dr. Victor Johnson, Director of The Mayo Foundation for Medical Education and Research, University of Minnesota Graduate School, invites members of medical schools and faculties; member national medical associations and their medical education committees; and organizations and individuals interested and qualified in medical education to submit to it topics and problems that should be considered within the frame of reference of a conference devoted to exploring the continuing education of the doctor after graduation from medical school.

Four general section subjects are currently being considered. These are: I. Basic Clinical Training for all Doctors, II. Advanced Clinical Training for General and Speciality Practice, III. Education for Research and Teaching, IV. Methods of Continuing Medical Education Throughout Life.

Dr. Raymond B. Allen, Chancellor, University of California in Los Angeles has been named President of the Second World Conference on Medical Education. At the First World Conference the late Sir Lionel Whitby of the United Kingdom was President.

The Conference objective is an exchange of information for the purpose of assisting in raising the standards of medical education of the world. This follows the pattern set by the First World Conference on Medical Education held in London, England in 1953 which devoted its deliberations to undergraduate medical education.

Simultaneous translation of English, French, Spanish, and if feasible, German will make possible the stimulating exchange of ideas and information—the inevitable result when doctors, who in their homelands speak many languages, convene and the thought and language of medicine is universal.

The Programme Committee wishes to provide the Conference with competent representative speakers and participants for panel and group discussion from every area of the world speaking to stimulating thought-provoking topics and considering problems universal to the doctor who has completed his basic medical education, regardless of his age, mode of medical practice or specialized interests or education. To accomplish this, the Committee needs suggestions and guidance in the selection of conference topics and eminent doctors qualified to speak on these subjects. Each country of the world recognizes doctors of this calibre within its nation. Every medical organization of the world is cordially invited to submit the names of these experts, the area of each expert's proficiency as well as topics and subjects, the discussion of which at such a world forum, would prove useful in elevating the standards of medical education the world over. Suggestions should be addressed to: The World Medical Association, 10 Columbus Circle, New York 19, New York.

Continuance of the Condensed MBBS Course

The Government of India have suggested to the State Governments and the Medical Council of India, as recommended by the Central Council of Health, the continuance of the condensed M.B.B.S. Course for a further period of five years beyond April 1956. The Government of Madhya Pradesh and Punjab have decided to continue the condensed M.B.B.S. Course for a further period of five years. The University of Mysore have also decided to continue the condensed M.B.B.S. Course beyond April, 1956. Facilities for the continuance of the condensed M.B.B.S. Course exist at the Medical Colleges at Indore and Gwalior. As regards the other States, the matter is still under con-

sideration of the Governments of Kerala and West Bengal. The Governments of Andhra Pradesh, Bombay and Orissa do not consider it necessary to continue the condensed M.B.B.S. Course for a further period of five years, as there is no demand from the licentiates of their States.

The Government of India consider that it is for the Universities and the State Governments to provide facilities for the condensed M.B.B.S. Course according to the required standards. The Medical Council of India have not yet agreed to the continuance of the course, as in their opinion its continuance might lead to lowering of standards for the regular M.B.B.S. candidates, if the institutions have to provide the facilities for the condensed course training at their own expense or with the help of the State Governments. The matter has however been taken up with the Medical Council of India. The Medical Council of India have stated that the matter will be placed before the Executive Committee of the Council at its meeting fixed for the 29th March, 1957.

The Roumanian National Congress of Medical Sciences

The Roumanian National Congress of Medical Sciences will be held from 5th—11th May, 1957 in Bucharest. The work of the Congress will cover four sections: Physiology (the role played by the nervous system in regulating the visceral functions); Medicine and Surgery (rheumatism, etiopathogeny, infantile rheumatism, the treatment of rheumatism, the surgical and orthopaedic treatment of the sequelae of rheumatism); the section of endocrinology and neurology (epiphysis, epilepsy); and the section for inframicrobiology, microbiology and parasitology (inframicrobian hepatites, leptospirose malaria).

For any information regarding the cost or the means of participation, please apply to the representatives of the Carpati National Touring Office, to be found in every country.

Union Internationale De La Presse Medicale

The Third Congress of the Union Internationale de la Presse Medicale will be held in B.M.A. House from September 13 to September 15, 1957, and it is hoped that many British medical editors will attend, as well as representatives from the medical press of all the countries which support the work of the International Union. The official languages of the congress will be English and French. The U.I.P.M. was founded at the beginning of the century, but the first world war put a stop to its work, and it was not until 1953 that the Union was revived through the efforts of the associations of the medical press in Belgium, France, and Italy. Since then two congresses have been held, the first in 1954 at Turin, under the joint presidency of Professor T. Oliaro and Professor Loeper, and the second in 1955 at Paris under the presidency of Professor Loeper.

The main purposes of the U.I.P.M. are to represent the interests of the medical press at the international level and to encourage the dispersion of medical journals beyond national frontiers, among other means by establishing friendly contacts between the representatives of the medical press of different countries. Dr. H. A. Clegg, editor of the *British Medical Journal* will be the president of the London Congress and Dr. W. A. R. Thomson, editor of the *Practitioner*, will act as programme secretary.

The Nutrition Society of England

A symposium will be held in Cambridge on July 5 and 6, 1957 on Flour and Bread.

Sir Rudolph Peters, M.C., F.R.S. (Biochemistry Department, Institute of Animal Physiology, Babraham, Cambridge) will preside.

International Congress of Dermatology

The 11th International Congress of Dermatology will be held at Stockholm on 31 July—6 August, 1957. The Congress has decided to limit the programme of the Congress to the following main themes: (1) Biology of Skin Surface, (2) Systemic Reticulosis, (3) Vascular Allergy, (4) Occupational Dermatoses, (5) Newer Developments in Dermatological X-ray Therapy, (6) Cosmetic Dermatology. Symposia will also be held.

Scholarship for Study in Tuberculosis in U.K.

The National Association for the Prevention of Tuberculosis, London, has offered a scholarship of the value of £350 to a medical graduate from India for study in tuberculosis in the United Kingdom during 1957.

The candidate will be selected by the Tuberculosis Association of India and will have to give an undertaking of return to tuberculosis work in India after the training.

The comprehensive programme of study will include two months' study at a sanatorium, of different forms of collapse therapy, pathology, administration, records and sanatorium routine; one month specialist experience according to the interest of the candidate, such as orthopaedic or genito-urinary or pneumoconiosis; one month's study in the treatment of tuberculous children, diseases of bones and joints and tuberculous meningitis; six weeks' at chest clinics for a study of domiciliary treatment, follow-up of contacts, tuberculin testing, B.C.G. vaccination, after-care and rehabilitation; and two weeks' at a mass radiography unit to study reading of miniature and large films, dark room technique, records, organisation and equipment.

Malaria Control of India

The Government of India and the U.S.A. signed a supplementary project agreement under which India will get $6½ million for her malaria control programme.

This is the first agreement under the U.S. Development Assistance Programme for the fiscal year ending June 30, 1957.

The money will be used to obtain from outside India 9,200 long tons of 75 per cent water wettable

D.D.T. powder and 200 long tons of 50 per cent water wettable Dieldrin powder.

Under the agreement, the Government of India will provide the rupee equivalent of $2·3 million to meet the costs of local operations and inland transportation.

India's nationwide Malaria Control Programme, now in its fifth year of operation, envisages the extension during the current year of the operations so as to give some measure of protection to about 200 million people living in malarious areas.

Lederle International Fellowship

Dr. C. J. T. Pinto, Surgeon at K. E. M. Hospital and pediatric surgeon at the Wadia Children's Hospital in Bombay, has been selected to receive a one-year fellowship for higher study in the U.S. under the International Fellowship programme of Lederle Laboratories. Under the programme, a Lederle International Fellowship is granted to the young physician in each country who, in the opinion of top medical authorities of that country, shows most accomplishment and promise in his speciality. The one-year fellowship provides living expenses while the recipient is in U.S. and cost of travel to the U.S. and return.

L.T.M. Course at the School of Tropical Medicine, Calcutta

The three months' course of instruction for the L.T.M. Examination which is open to medical men only, will begin from the 15th July, 1957. Application for admission in the prescribed form should reach the Director, School of Tropical Medicine, Calcutta by the 14th May, 1957.

Specialities Board Certificates

In so far as Government of India are concerned, the certificates granted by the Boards of Speciality in the U.S.A. and Canada are considered as alternative qualifications to M.D. and M.S. degree granted by the Indian Universities for all posts for which these post-graduate qualifications are required. This decision of the Government of India has also been commended for the consideration of State Governments. It may however be noted that the Medical Council of India has not yet recognised these speciality Board Certificates for teaching purposes.

Draft Amendment in the Drug Rules 1945

In the said rules, after rule 101 the following rule shall be inserted, namely—

"101-A—Labelling with licence number and batch number :—

(*a*) Every drug manufactured in, or imported into, India shall bear on its label a distinctive batch number, that is to say, the number by reference to which the prescribed tests and details of manufacture of the particular batch from which the substance in the container is taken are permanently recorded and are available for inspection; the figure representing the batch number being preceded by the words 'Batch Number' or 'Batch No.' or 'Batch' or 'Lot Number' or 'Lot No.' or 'Lot.'

(*b*) Every drug manufactured in India shall bear on its label the number of the licence under which the drug is manufactured, the figure representing manufacturing licence number being preceded by the words 'Manufacturing Licence Number' or 'Mfg. Lic. No.'

Uttar Pradesh Medical Council

At a meeting of the Uttar Pradesh Medical Council held on December 7, 1956, it was decided that the name of Dr. Viswanath Dube (Late Reg. No. 1473) may now be restored.

REVIEWS

Atlas und kurzgefafites Lehrbuch der Phonokardiographie und verwandter Untersuchungsmethoden—Von Priv.-Doz. Dr. K. Holldack und Dr. W. Wolf, Heidelberg, Mit einem Geleitwort von Prof. Dr. K. H. Bauer, Heidelberg und einer technischen Einführung von F. Schwarzer, München. 1956. VIII, 171 Seiten, 179 Abbildungen. 4°. Ganzleinen DM 49.50 George Thieme Verlag, Stuttgart.

Atlas and Short Textbook of phonocardiography and related Examination Techniques by Priv. Doz. Dr. Med. K. Holldack and Dr. Med. D. Wolf, Heidelberg, with a foreword by Prof. Dr. K. H. Bauer, Heidelberg, and a technical introduction by F. Schwarzer, Munich. VIII, 171 pp., 179 illustr. George Thieme, Stuttgart, 1956. Price DM 49·50.

It is highly significant that the prefatory remarks to this important cardiological publication have been written by a surgeon who had ample opportunity to check the cardiographers' results in the operation theatre and found them capable of replacing in many cases heart catheterisation. It is equally characteristic that the author's introduction opens with the statement "the era of electrocardiology is over. The haemodynamic, i.e., the mechanical processes have been reinstated in their rightful place."

After digging one's way through 14 pages on the physical and technical foundations of phonocardiography, it is a pleasure to follow step by step the clear instructions of recording phonocardiocarotis sphygmo- and phlebograms as well as the curves of respiration and of the oesophagus pulse with frequent hints about all the mistakes one could commit. Then follows in the same order detailed advice how to analyse and interpret the records of the first and second heart sound, arterial and venous pulse tracings, respiratory and oesophagus pulse curves. The next chapter deals in 50 pages with every possible pathological sound, the significance of the first sound and the mitral opening sound for the diagnosis of mitral stenosis, and the diagnostic findings in every form of acquired valvular disease. This is followed by an equally elaborate chapter of 40 pages on the findings in every imaginable congenital heart disease. In the last 15 pages

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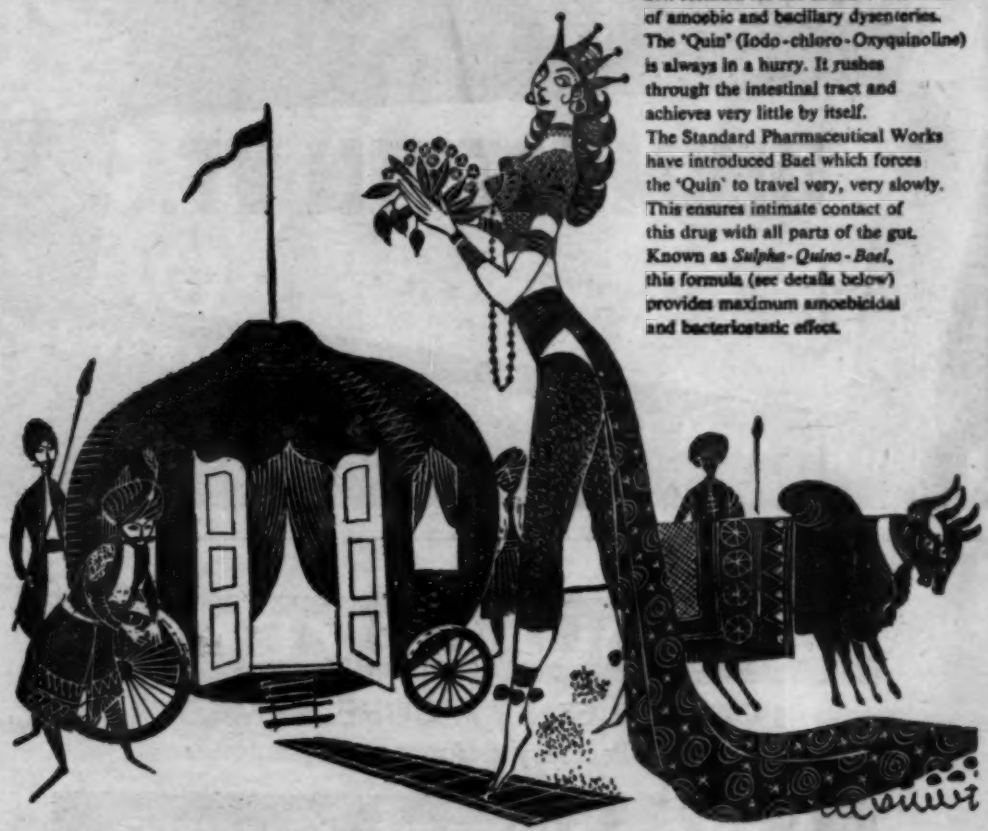

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are discussed accentuation of sounds, musical and functional murmurs, sound records in air embolism, extracardiac sounds and vascular hums. 223 references to literature of every language including publications of 1955 and a complete index conclude this work.

Apart from its surprising completeness which covers the most frequent as well as very rare conditions, the main value of this elegant volume lies in its wealth of illustrations. Every word is elucidated by multiple graphs, recorded by four- or eight- channel instruments which trace simultaneously either three phonocardiograms of various frequencies and one lead of the e.c.g. or, more often four phonocardiograms (frequencies h_1, m_2, m_1, t) one carotis sphygmogram or one phlebogram and two leads of the e.c.g.). The legends are so detailed that they are essential parts of the text: most useful diagrams of particularly important tracings further enhance the didactic value.

An English translation of this important book, which contributes greatly to the understanding of heart dynamics, is urgently required. Not only every cardiologist but every clinician and, especially, all advanced students of medicine and their teachers will welcome it as a reliable guide through new and difficult territory.

Angiopathia diabetica, Konservative Behandlung des Zuckerbrandes—Von. Prof. Dr. M. Bürger, Leipzig, 1954. VIII, 190 Seiten, 81 zum Teil farbige Abbildungen, Lex.-8°, Ganzleinen DM 69.—Georg Thieme Verlag, Stuttgart.

Angiopathia Diabetica, Conservative Treatment of Diabetic Gangrene—By Prof. Dr. M. Bürger, Leipzig. VIII, 190 pp., 81 partly coloured illustr. George Thieme, Stuttgart, 1954. Price DM 69.

This interesting monograph is timely because in advanced countries, where insulin treatment is used as a general routine, diabetic patients nowadays do not die of coma but of vascular diseases. The author was the first (1929) to isolate glucogon, the insulin anagonist, which stands today in the forefront of interest; he has pursued diabetes research for 40 years, basing the work under review on the observation of 469 cases of diabetic gangrene, 210 of them treated according to the author's present recommendations.

The book is divided in three parts. In the first, elaborate attempts are made to establish the existence of a specific diabetic angiopathy. They are based on characteristic features in the chemical composition of diabetic vessels and functional changes of the capillaries, a specific diabetic retinopathy and changes in renal glomeruli to be found in diabetes only. The effects of insulin on blood vessels and especially the capillaries are discussed. The second part is based on the author's theory that the main organ of metabolism is the musculature and that the junction between circulation and metabolism is represented by the total area of the capillaries. The connections between capillary disturbances and metabolic imbalance are investigated, showing that the effect of physical exertion is different in the diabetic organism from that in the healthy one because diabetic muscles are working uneconomically. Muscle exertion potentiates the blood sugar reducing effect of insulin by improved capillary blood supply to the muscles, which also improves their working economy. Further it is tried to prove that in the course of diabetic metabolic processes, toxic substances are produced, the chemical nature of which is not yet known; they are eliminated bound to glycuronic acid. In support of this hypothesis it has been found that diabetic urine, after deduction of all known caloric values, contains a considerable amount of uncovered "rest calories".

The last part contains a good description of diabetic gangrene and a detailed discussion of its conservative treatment which is based on the author's rehabilitation diet. He supplies 500 g. carbohydrates per day covered by 120 to 180 units insulin. Such large amounts of sugar and starch to which European patients are not used, under conditions where rice was apparently not available, are made more palatable by mixing sugar and fruit juices with "cognac" (distilled grape juice). Fifty pages of elaborate tables contain every detail of treatment and progress of every one of 70 cases of dry and 140 cases of moist gangrene treated during the last 17 years with various forms of a diet rich in carbohydrates plus an ample supply of insulin, both of which the author considers equally important. Vitamins, sulpha drugs and antibiotics are used, but believed to be only of secondary importance. The results are highly satisfactory. Whereas purely surgical treatment of diabetic gangrene with high amputation often had a mortality rate of more than 50 per cent, far more than 50 per cent of the author's cases have been cured without amputation. Even osteolytic processes which appear in the course of gangrene, proved to be reversible under conservative treatment. The author deserves the thanks of the diabetic community and their medical advisers.

Internal Medicine: a Physiologic and Clinical Approach to Disease—By Robert P. McCombs, B.S., M.D., F.R.C.P. The Year Book Publishers, Inc., Chicago, U.S.A., 1956. Board bound, 9" × 6", 706 pages with 49 illustrations. Price $10.00 post paid.

The subject of internal medicine has gradually become quite extensive in its compass, and it is often very difficult to produce a work on this subject without running into voluminous proportions. The handbook size of the present volume has been retained by avoidance of duplication, elimination of detailed discussions of subjects concerning acknowledged specialities like neurology and psychiatry, and avoiding details about electrocardiography. As a result, this neat volume, of twelve chapters, sets out within its modest size, summaries of most important clinical facts, physiological concepts, diagnostic methods and therapeutic measures of use in the study and management of internal diseases. The text has been described with a practical, matter-of-fact method of approach which is likely to appeal to a busy practitioner having little time for going through detailed and extensive descriptions and discussions in standard text-books or books of reference of much bigger size.

Medical Physiology—Edited by Philip Bard (with 13 collaborators). The C. V. Mosby Company, St. Louis, U.S.A. Tenth edition, 1956. Board bound with cloth, 10″ × 6¼″, 1421 pages, with 438 illustrations, 5 in colour. Price $14.00.

The first edition of this book, with a slightly different title, was published in 1918 by the late Prof. J. J. R. McLeod who died in 1935 shortly after the publication of the 7th edition of his book. The present editor has been in charge since 1938, from the 8th edition. Due to extensive changes and deviations from the original text the title of the book has been amended to the present one. The book mainly deals with those portions of the science of physiology which are at present the concern of medical students, medical scientists, and practitioners of medicine. The editor and his collaborators have together produced an excellent text-book, which is dependable, authoritative and highly informative, containing, throughout the text, a wealth of references for further reading. The list of references have been grouped separately, according to the various chapters and conveniently assembled at one place—at the end of the book. The volume is sure to take its due place as a standard text-book and also as a book of reference by advanced students and teachers.

Health of India, Souvenir, Inaugural session of the Indian Public Health Association, September, 1956.—Edited by Dr. S. C. Seal from 110, Chittaranjan Avenue, Calcutta 12. 194 pages, 11″ × 8½″; price Rs. 10/- (half-rate for members of the Indian Public Health Association).

This souvenir volume is the first of its kind, having been issued during the inauguration of a new organisation devoted to studies and solution of public health problems in India. The reading matter is divided into 21 sections, the articles having been derived from authoritative, and often official sources. A great deal and variety of information, on public health in India and allied subjects, has been offered to the reader. Everyone interested in the multifarious aspects of public health and related problems in India would benefit, in one or more ways, from the many thought-provoking articles in this volume, which should be of interest to all active public health workers in India.

The Sarawak Museum Journal, Volume VII, June 1956—Edited by Tom Harrison, D.S.O., F.R.G.S., F.R.A.I., F.R.E.S. etc., Government Ethnologist and Curator of the Sarawak Museum. Issued by the Museum, Kuching, Sarawak, Borneo. Paper cover, 9½″ × 6″, 258 pages, price $3.00 per issue.

This Journal is an occasional publication by the authorities of the Sarawak Museum, and makes fascinating reading, giving the reader close insight into the land, the people and their history through the ages. Also included are interesting articles about the government, archaeological, anthropological and biological features about this part of the isolated island to the south of the South China Sea near the Philippines. Some folk tales and songs common in certain parts of the country have also been put in. These help to give the reader an intimate appreciation of the interesting people and their customs and lives. The last chapter, a review of four books, covers the literary aspect and is indicative of the rich variety available there. This Journal seems to be a "must" for readers who desire to learn about the land and the people of Borneo.

OBITUARY

Dr. S. P. Chatterjea, M.B.

Dr. Santi Prosad Chatterjea was born on the 21st January 1903. After passing the I.Sc. examination from the Krishnagar College he joined the Medical College of Calcutta. Dr. Chatterjea after obtaining his M.B. degree had ample opportunities to settle in Calcutta for medical practice but his inordinate desire to serve the people of his native district Nadia led him to set up practice in Krishnagar.

He joined the Krishnagar branch of I.M.A. just after he had settled in Krishnagar. An energetic member of the Association, he was its hony. secretary for a number of years. His professional relations and contacts were pleasingly ethical and highly appreciated by his colleagues.

DR. S. P. CHATTERJEA

Dr. Chatterjea was attached to the Krishnagar Sadar Hospital as an hony. Visiting Physician for the last 20 years. After revival of the local T.B. Clinic in 1954, he was in charge of it till his last illness. For his sympathetic care, Dr. Chatterjea was very popular amongst hospital as well as private patients.

He had an attack of jaundice in December 1956, followed by ascites. He was removed to the S. S. Karnani Memorial Hospital in Calcutta where he breathed his last on the 15th January 1957.

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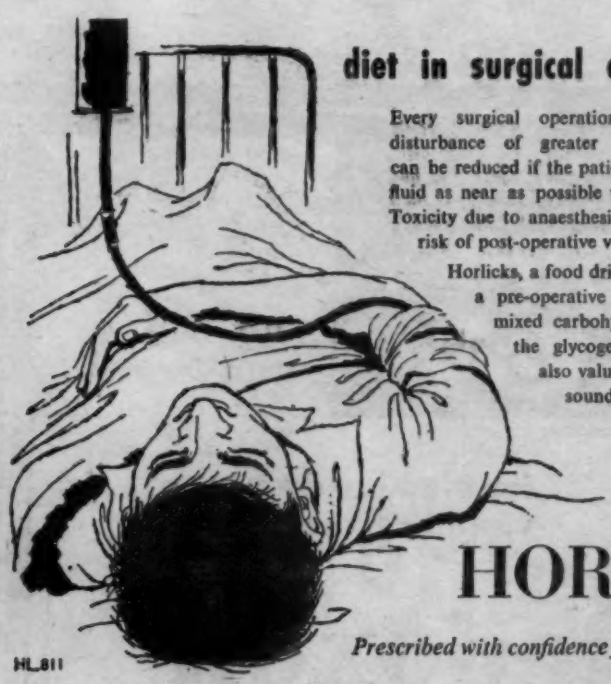

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SUPPLEMENT
Journal of the Indian Medical Association

Vol. 28, No. 6 CALCUTTA March 16, 1957

IX ORISSA STATE MEDICAL CONFERENCE 1956, SAMBALPUR

The 9th Orissa State Medical Conference was held at Sambalpur on the 7th and 8th October, 1956. Dr. S. C. Das, Chairman, Reception Committee accorded a hearty welcome to the delegates and guests. Over 200 delegates and nearly 500 visitors attended the conference. Dr. P. K. Parija, Vice-Chancellor, Utkal University inaugurated the conference. Dr. K N. Misra, President of the Indian Medical Association, Orissa Branch, presided over the conference. Srimati Basanta Manjari Devi, Deputy Minister of Health, Orissa, graced the occasion as chief guest and opened the Health and Scientific exhibition. In the absence of Dr. Gantayat, Director of Health Services, Dr. K. N. Misra inaugurated the Scientific Sessions. Dr. A. K. Bose, Vice-President, Indian Medical Association attended this function as well as the conference on special invitation.

Dr. S. C. Das welcoming the guests present said, "The practice of medicine brings us in contact with patients, colleagues and on several occasions with public opinion and interest. In each of these relations we have often to face situations not always free from difficulties. The relations have evolved certain practices which we call medical ethics and etiquette. This institution will serve not only to maintain the professional code but also guide us in our responsibility to patients and our duty towards people and help organise a health scheme in a few villages near about Sambalpur through our Association." He further mentioned "The Indian Medical Association is an organisation which works to the best interest of the national health. In western countries the medical associations have a distinctive status and role to play and have an honoured place in the plans made and laws passed. But it pains me to point out that uptil now we have not been fortunate to receive such recognition."

Srimati Basanta Manjari Devi, Deputy Health Minister, Orissa, laid the foundation stone of the Reading Room, Library and Cultural Hall of the local Association. Srimati Basanta Manjari Devi in her address eulogised the activities of the Association and thanked the members for putting up a Reading Room, Library and Cultural Hall of the Association and told the doctors "That this is a noble profession which requires infinite patience, uptodate knowledge and a great deal of human sympathy on their part often involving sacrifice of personal comforts and that their real compensation is the satisfaction that they derive in having helped their utmost in relieving or minimising suffering of the fellow being."

Inaugurating the Ninth Orissa State Medical Conference, the Vice-Chancellor of Utkal University Dr. P. K. Parija said that with the rapid advancement of science the common man was being deprived of the benefit of the advances made in allopathic medicine often merely on the ground of cost. He said "one notes with some regret that nowadays most of the doctors have taken to prescribing patent medicines which are costly. Hence people in the villages and even in towns are taking to quack treatments. People ill-qualified or unqualified are practising in villages to the danger of the life of the people."

Dr. Parija emphasised that medical propaganda should be made wide and medical help must be made available to countryside so that people should come to the doctor at the earliest possible stage of their diseases. He suggested that for this the Department of Public Health ought to spread the idea of sanitation among the people and thereby ensure prophylactic measures on the part of people. How best this can be done is the concern of the Government. A welfare Government ought to take measure in this direction so that people cannot blame the doctors for the failure of their treatments."

Srimati Basanta Manjari Devi, the Deputy Health Minister of Orissa as the chief guest in the Ninth Orissa State Medical Conference said, "There is no worthier profession for a man to follow than that of a physician, a surgeon or a doctor. A true doctor learns a spirit of service of the suffering humanity which, I can say with confidence, is not to be found in any sphere of human activity. In the olden days, the profession of a doctor was an honorary one. In those days it was considered a sin for a doctor to charge any fee for whatever he did for humanity. That was the spirit in which humanitarian work was undertaken by those to whom it was given to study the science and to give the benefit of science to others among their fellow human beings. But unfortunately we are now in a different age, i.e., I should say that we are living in a commercial age and in this age something has got to be done. Since independence our National Government is quite alive to the change in the mode of living and has been contemplating to do the best possible for all classes of people, including those belonging to medical profession, who, by dint of their humanitarian service, have won the good-will and sympathy of every one. India today is passing through a stage of rapid development towards her goal of achieving an ideal socialistic pattern of society when every man of the soil, whatever his profession, whatever his occupation must work in a missionary spirit and with perfect confidence in himself and in the greatness of the country's future."

Dr. K. N. Misra inaugurated the scientific session in the unavoidable absence of Dr. S. N. Gantayat, Director of Health Services, Orissa who was to inaugurate the session.

Dr. K. N. Misra in course of his presidential address said "Since the last world war, we have completed two plans for the progress and prosperity of our country, i.e., the post-war reconstruction and the 1st Five Year Plan. We have definitely made some progress though not to the degree we desired. The world war No. II and the partition of India brought about terrible strain on our national economy. So since our independence the planning commission has laid great emphasis on raising the economic level of the country by utilisation of its natural resources to their best advantage. Naturally social services have not received the same priority and attention as agriculture and industry. In the 1st Five Year Plan, Social services received only 23 per cent of the total quota, out of which "Health", including water supply and sanitary programmes, re-

ceived only 6 per cent. Even in the 2nd Five Year Plan "Health" has not been allotted a greater proportion of share. During the alien rule, the social services, especially "Health", were very much neglected. Even now after independence things have not improved much. The Planning Commission admits that on account of the limited resources at the disposal of the State, its direct participation in social welfare cannot extend much beyond the sphere of elementary social services like education and health. Even in respect of education and health it will be many years before the provision made by the State reaches standards which can be regarded as the barest minimum for a civilised society. Although the living standard of the common man has to be raised and he must have enough food, clothes and a good house to live in, he must possess health to enjoy them. A rich man does not enjoy his riches if he has no health. So in the national planning, health is no less important than material prosperity and should have received higher quota at least in the 2nd Five Year Plan.

DR. S. C. DAS, THE CHAIRMAN OF THE RECEPTION COMMITTEE.

As the allotment is very small it becomes incumbent on those in charge of health administration to see that every pie of the quota is well spent. It is admitted that the present administration spends more on supervisory staff than on actual schemes. This has to be adjusted. We need more soldiers than commanders.

RURAL HEALTH

Eighty-eight per cent of our people live in the villages. Any scheme which does not affect these 88 per cent is practically useless for our country. Communicable diseases such as Malaria, Filaria, Leprosy, Tuberculosis and Venereal diseases are having a heavy toll on human life annually. We are still having large epidemics of preventable diseases such as Cholera, Smallpox, Bacillary Dysentery and Enteric Fevers, for which millions of lives are lost annually. Our main attention should therefore go to the prevention and control of these diseases, which affect the mass.

In the 1st Five Year Plan an effective beginning was made in this direction. For control of Malaria, 162 units were created, each protecting about a million people through indoor spraying with D.D.T. and treatment of malaria with anti-malarial drugs. For control of Tuberculosis, extensive B.C.G. vaccination was carried out with provision for isolation of cases and their rehabilitation to a limited extent. Similarly some steps were also taken for control of Leprosy, Filaria and Venereal diseases. As compared to Rs. 22 crores allotted in the 1st plan, the 2nd plan provides about Rs. 55 crores. But this will not be enough to eradicate these diseases from the country.

Water-borne diseases such as Cholera, Typhoid and Bacillary Dysentery can be checked completely by preventive inoculations and good water supply. This programme should therefore receive highest priority. Sufficient money should be ear-marked to provide good water supply to every citizen in the country both in the rural and urban areas by the end of the 2nd five year plan, even at the sacrifice of some other less urgent schemes.

Community Projects and National Extension Service are gradually getting very popular. The aim of these is not merely to provide ample food, clothing, housing, health and recreation in the villages but also to bring about a change in the mental outlook to live a better life. It is proposed to cover the entire country with National Extension Service during the 2nd five year plan. This will have a great bearing on health problems of the country provided trained personnel and proper guidance are made available.

During the Post-war period, Bhore Committee gave a comprehensive scheme for improvement of health in India. It had the underlying principle that no individual should fail to secure adequate medical care because of the inability to pay for it. The Committee felt urgent need for providing as much medical relief and preventive health care as possible to the vast rural population of the country and recommended that 15 per cent of the State revenue should be allotted on health programmes. But the Planning Commission brought about many modifications in this scheme on the plea of shortage of funds and allotted only 6 per cent of the revenue. For rural medical aid health units have been set up in the National Extension and Community Projects where curative and preventive aspects of medical care are integrated. If National Extension Service extends to every part of the country it is hoped that some medical aid will be available in every village by the end of the 2nd five year plan although it will be far short of the short term recommendations of the Bhore Committee.

MEDICAL EDUCATION

(*a*) *Undergraduate*—The Medical curriculum has been static for more than 50 years. Doctors throughout the world have felt the necessity of a change according to the modern needs of medical practice. There has already been a world conference on medical education. Though there is general agreement on the essentials of the various subjects to be taught to medical students the curriculum is bound to vary according to the particular needs of the different countries. In November 1955 Government of India convened a Medical Education Conference in which many eminent doctors of India, South East Asia and World Health Organisation participated. It was felt that the preventive and social medicine should henceforth form a major subject and that the teaching of the various subjects should be so integrated that the medical student after completion of the training and internship would look after curative, preventive and social aspects of medicine as a basic doctor. Instead of too much stress on examinations greater importance would be given to day-to-day progress of the student. Even though there is great demand for doctors in the country the standard must be maintained uniformly high to make the student professionally efficient. The teaching in medical institutions requires improvement by appointment of adequate staff

SRIMATI BASANTA MANJARI DEVI, DY. HEALTH MINISTER, ORISSA, THE CHIEF GUEST OF THE CONFERENCE.

so that the high percentage of failure can be reduced by raising the teacher-pupil ratio.

The selection of right type of students is another problem. Some say that the selection should be strictly made on merit only, i.e., on the result of the University examinations. According to some others extra curricular activities such as sports, games and social service should also be taken into consideration. I would add that a clean record of good conduct and morals, personality and power of expression in the language in which the student is taught the professional subjects, should count in the selection of students for the medical course.

There is a great shortage of doctors and other trained health staff to carry out the health programmes of our country. At present we have about 70,000 doctors in India. It is expected that there will be an annual outturn of about 2,000 doctors out of the 40 medical colleges now existent in our country. Allowing one doctor for every 5,000 population and additional supervisory staff required for medical administration it is estimated that 90,000 doctors will be needed by the end of the second five year plan, i.e., by 1960-61. So we require 4,000 doctors every year against the present annual outturn of 2,000 doctors. Unless we expand our existing Medical Colleges and establish more new ones the health programme is not likely to succeed. In some States it is reported that there is actually over-crowding of doctors. Steps should be taken to get their statistics, so that their services may be requisitioned to areas in great need.

(*b*) *Post-Graduate*—There should be provision for Post-Graduate medical education and research in every Medical College or at least in the most well-equipped Medical College in each State so that a sufficient number of efficient teachers, research workers and specialists may be produced to take up work according to the needs of the country.

The medical science has progressed so much that it is not possible for a basic doctor to practise every branch of medicine with detailed knowledge and techniques. Though the basic doctor is the main pillar of medical aid and is able to manage all types of cases generally, there would be some cases of intricate nature requiring consultation with specialists. So a certain number of basic doctors have to take up special training in one of the several branches of medicine to work as specialists. It is hoped that the All India Institute of Medical Sciences which is going to be established this year would fill up a great gap in this direction.

INDIGENOUS AND OTHER SYSTEMS OF MEDICINE

In a country where medical aid to people in general is at the lowest level, any system that is readily available is bound to become popular. Any person, be he a kaviraj, an allopath, a homoeopath or a quack, who readily offers a dose of medicine in times of greatest need creates confidence in such patients and brings about a psychological change and cure. So followers of a particular system of medicine will not be wanting in a country like ours. The Planning Commission rightly observed that the controversy with regard to the truth and merits of any particular technique of cure or approach to the problems of health and disease can only be settled on the touchstone of research. Scientifically conducted investigations will, in course of time, decide the value and validity of the different techniques. Those which can justify their existence, will necessarily become integrated into scientific medicine.

The indigenous systems and homoeopathy should, therefore, form subjects of post-graduate studies in the University so that proper investigations can be arranged and efficacious drugs of different systems found out and absorbed into the scientific medicine. The amounts now spent on Colleges of Indigenous Systems and Homoeopathy could be better utilised under the Universities in the post-graduate departments of medicine where efficient Vaidyas or Homoeopaths could help post-graduate students in scientific research. Any doctor who has practised in India for some years must have come across cases of perforations of the stomach or intestine, and of acute appendicitis, strangulated hernia, difficult

DR. K. N. MISRA, THE PRESIDENT OF THE CONFERENCE.

labour, pneumonia, cholera and bacillary dysentery brought down to hospitals or clinics almost in dying condition after care of a Homoeopath or a Kaviraj who gave a false hope of cure and delayed treatment for several days. Should this continue for ever?

FAMILY PLANNING

Family planning has become an urgent problem in the health programme. India has now a population of about 36 crores. With gradual rise of the living standard and with better health condition the population is bound to rise year by year. It is likely that by 1961, i.e., by the end of the second five year plan the population would rise to 40 crores. In the present conditions an increase in man-power resources does not strengthen economy but in fact weakens it. Unless birth-control is practised effectively from now it may be difficult to raise the living standard as the natural resources of the country will be used up by the increased population.

Unfortunately the birth rate is high amongst the poor classes who are not yet educated to appreciate its value. Due to unhygienic conditions and malnutrition a high rate of infant mortality and high incidence of disease and deformity are common among the poor children. Birth-control clinics should therefore function more in the localities of the poor than elsewhere.

INDUSTRIAL HEALTH

A large number of toxic agents is now-a-days used in modern industry which are likely to produce several diseases. The Employees' State Insurance Act has made a beginning for medical care of about two million workers working in some big factories. The Act provides for an extension of the term "Worker" to all classes of employees including agricultural labour. But there appears to be no provision for the extension of the Industrial Health Programme to the agricultural class in the 2nd Five Year Plan, although emphasis has been laid on the development of agriculture.

PROHIBITION OF MEDICAL PRACTICE

As there is great dearth of doctors in the country to cope with the Health Programme of the 2nd Five Year Plan it will be a wise step if the services of all registered doctors are requisitioned by the State and placed at health centres, hospitals and community projects suitably according to their qualifications and experience debarring them all from private practice. This will not only allow timely completion of the Health Programme but will create a healthy atmosphere in the medical profession as a whole. The quality of service to the people in general, especially to the poor will necessarily improve. In teaching institutions, prohibition of private practice will give ample time to teachers for efficient teaching and research. The scheme will succeed only when remuneration to doctors is made in no way inferior to that of other civil servants in the State Cadre. I do not think the scheme will be very expensive. It will be possible to adjust the expenditure out of the quotas allotted to the Health Plan.

TYPE OF MEDICAL AID

Medical aid according to modern conception is not only prevention and cure of diseases but also maintenance of positive health, which means physical, mental and social well-being. To bring about this condition in an individual or in a community, provision of hygienic housing, good food and drink and creation of an environment of social security by proper education, culture and employment are important accessories. So a doctor in his medical practice has to adjust himself to this new conception of medicine and to become a friend, philosopher and guide to the individual, to the family and to the community under his charge. The doctor-patient relationship is bound to improve with this conception. The pleasant relationship is marred to some extent, as we all know, when the question of fees comes in. But when the State provides adequate remuneration to the doctor due to his new responsibilities and prohibits him from collection of fees from his patients, the embarassing position of the doctor will disappear. The profession will be appreciated as 'noble' both by the rich and the poor.

OUR OWN STATE AFFAIRS

Let us consider the 2nd Five Year Plan which is beginning since April 1956. Our State submitted to the Planning Commission a draft plan for this period showing a total out-lay of Rs. 121·24 crores, excluding the provisions required for the expenditure of the Hirakud Project—Stages I and II and the Delta Irrigation Scheme. The Planning Commission considered the State Plan on population basis and reduced it to Rs. 92 crores inclusive of the expenditure of the Hirakud Project and the Delta Irrigation Scheme. I have not been able to understand this sort of distribution of national wealth at the Centre. Does this mean that a State which remained backward during the alien rule, would continue to remain so in the coming years? The existing gap between a State and a State must be filled up by extra grants and additional care from the Centre so that our country as a whole first comes to the same level throughout, and then progresses equally well in future years. Without this, the sermon of one country and one nation has no meaning.

The revised plan for the health programme in our State now stands at an estimated cost of Rs. 3·5 crores. There is also an additional grant of 50 lakhs for rural water supply. To those who are interested to know details, I would refer you to the Revised Draft of the second Five Year Plan of our State—pages 250 to 262. Taking into consideration of a very low level of health in this State on account of low economic condition, this allotment is too insufficient to meet the urgent demands on "Health".

There is great dearth of trained staff in this State to carry out even our curtailed health-programme. The population of our State in 1951 was 1,46,45,940 and it is estimated that the population would rise to about a crore and a half by 1961. Allowing one doctor for every 5,000 people in accordance with the target fixed by the Planning Commission, we require 3,000 basic doctors on population basis. Besides, we require about 400 doctors to work as supervisory staff and as teachers in the medical and allied institutions. We have now only 1,272 doctors in the State Register. So we require 2,128 more doctors in the next five years, i.e., 425 doctors annually. We have got only one Medical College in our State where we used to admit 50 students annually. Recently we have increased the seats up to 62 and propose to increase to 75. We can expect not more than 75 per cent success and so our annual out-turn of doctors will be only about 51 against the annual demand of 425.

The shortage of trained personnel other than doctors is still greater. According to the Planning Commission's standard we require one nurse and one midwife for every 5,000 population and one health visitor for every 20,000 people. So we require 3,000 nurses, 3,000 midwives and 750 health visitors by 1961. Now we have only 250 nurses, 199 midwives and 15 health visitors. When we compare these figures with our requirements, the State Health Plan to increase admission into our only Medical College upto 75 annually against a deficit of 1,728, to train 120 nurses against a deficit of 2,750, and 199 midwives against a deficit of 2,801 and 125 health visitors against a deficit of 735 is ridiculous. While Medical Colleges established some years after ours have already started post-graduate education, we have no such plan in the next five years. While other States have started two or more Medical Colleges in each, we have no plan for one more Medical College even. The same lack of foresight is exhibited in opening Training Schools for

other health staff. The result will be that towards the end of the Second Five Year Plan we would be indenting health personnel from other States to carry our scheduled health programmes.

Among other features of our current Health Plan there is a proposal to establish 40 Primary Units with 8 Secondary Units to provide co-ordinated health services. There will be some increase in bed-strength of hospitals including our Medical College Hospital. There is also provision for a Mental Hospital and a T.B. Hospital in our State. A 'Cancer' Hospital is likely to be established in the near future by the personal efforts of Srimati Basanta Manjari Devi, Deputy Minister of Health. I must openly in this Conference express our thanks to her for such an enterprise. But an Infectious Diseases Hospital in the Medical College, which is a dire necessity has not been provided in the plan. Malaria control and mass B.C.G. vaccination will be expanded and so also anti-Leprosy and anti-Filaria measures. But no provision has been made for compulsory vaccination and mass inoculation against Cholera and Enteric Fevers. The present epidemics of Cholera and Bacillary Dysentery in some coastal districts of Orissa should be an eye-opener in this direction. When these districts were flood-affected it was definitely known that the standard of nutrition in these areas will continue below normal, however much we give the relief. Had we foreseen to give mass inoculation of T.A.B.C. in advance of the usual season of these epidemics, such a calamity might have been prevented to a great extent. A stich in time saves nine. During the flood havoc of the last year, preventive inoculation and distribution of sulpha tablets produced very good results. Preventive measures have always a greater value when given in advance of an outbreak of an epidemic. In a population which is not sufficiently health-conscious, some sort of compulsion may be needed for the benefit of society.

HEALTH SERVICES

Although there has been strong recommendation of the Bhore Committee and the Planning Commission for integration of preventive and curative sides of the medical practice, officers of both sides are still working in tight compartments. The basic doctor after his training loses his touch with one side or the other on entering Government Service with no gain to himself or to the State. During revision of the pay scales in Orissa in 1947 our State Medical Service Association, offered, probably first in India, their memorandum to Government that they were all willing to forego their private practice provided their pay scale was fixed as any other Provincial Service. This offer meant a great sacrifice to some members of the profession. The then Government did not accept this offer and indirectly forced them to earn a part of their income by private practice. This system of private practice among Government Servants of the Medical cadre still persists much to the disadtage of the public and also the Government, in obtainin efficient services in the Medical Institutions. Is it not high time that there be stoppage of private practice for all types of medical servants, and be an amalgamation of both the medical and health cadres? This will obviate the difficulty of getting suitable men on the preventive side and stimulate young officers to work whole-heartedly.

IMPROVEMENT OF AYURVEDA

In the second Five Year Plan of our State a sum of four lakhs is provided for the improvement of the Gopabandhu Ayurvedic Vidyapith. How we wish this money being diverted to the post-graduate studies of Ayurveda under the anspices of the Utkal University. At present, we are producing a band of young men out of this Vidyapith, who receive very elementary training of both Ayurveda and Allopathy and cannot therefore practise either system of medicine better than a quack. When we are planning to raise the standard of medical education in order to carry efficient medical aid to the remoteat corner of the country, and have accepted the M.B.B.S. standard as the base line of medicine, is it not a sin to promote such quackery?

PROVINCIAL HEALTH BOARD AND HEALTH COUNCIL

The Bhore Committee recommended that there should be a Provincial Health Board and a Provincial Health Council in each State. The functions of the Board are the planning of health policy for the State as a whole and the making of recommendations in respect of grants to be sanctioned by the State Government for health schemes in the local areas. The function of the Council is to express expert view on any technical aspect of the organisation and functioning of the health services. It will be entitled to advise, not only on matters referred to it by the Minister but on any matter within its province on which it feels it right to express its expert opinion. I do not know if such a Board and a Council are functioning in our State for execution of our State plans on health. I once heard of a meeting of such nature a few years ago. Medical science is a highly technical subject and a Health Minister who is generally a layman cannot function efficiently in the interest of the State if he is guided only by the Head of the Health Department without an Expert Health Council. I would urge on our State Government for immediate establishment of a Health Council for satisfactory progress in health programme in the second Five Year Plan. The State Development Advisory Board which consists of officials as well as a large number of non-officials representing various interests, i.e., Trade, Commerce, Industry, Economics etc. should also include one or two non-officials representing 'Health'.

The Orissa Council of Medical Registration which was newly created during the Governor's Rule or near-about the end of that period consisted of only nominated members. The same state of nomination still continues in 1950, i.e., in the 9th year of our independence. While democracy is the avowed policy of the State, bureaucracy still prevails in this Council.

The Orissa State Medical Association came into existence in 1946 and became affiliated to the Indian Medical Association. I do not know if our State Government is aware of its existence and activities. So far no advice on health matters is sought from this Association although it is an expert non-official body and co-operation with Government is its policy. The only small recognition which Government has so far given to the Association is the inclusion of a representative in the governing body of the S. C. B. Medical College and that too has probably been given reluctantly as the representative's name appears last in the list.

* * *

The following resolutions were passed at the Conference :

1. This Conference records its deep sense of sorrow on the sad demise of Pandit Godavari Mishra, the founder of the Utkal University and one of the most prominent sons of Utkal and convey its heart-felt condolence to the members of his bereaved family.

2. In view of the acute dearth of medical personnel for the implementation of the many developmental plans, 9th Orissa State Medical Conference of I.M.A. recommends to the Government of Orissa that superannuation of all Medical and Public Health Officers be extended from 55 to 60 years.

3. The President of the State Branch or his nominee will represent the Association in the Governing Body of the S. C. B. Medical College, Cuttack. (This is an amendment to Resolution No. 2 of the Orissa State Medical Council held on 7-10-51).

4. The Orissa State Medical Conference will be held every year generally near about the month of February. (This is an amendment to Rule No. 1 of the Orissa State Conference, Appendix A).

5. It is proposed to install a permanent insignia for the President of the Annual Conference. This insignia will be worn by the President on the occasion of Annual Conference. Donation should be raised from the members of the Association for this purpose.

6. It is proposed that the Orissa State Branch of I.M.A. should publish a yearly report on the activities of different branches under its jurisdiction for distribution amongst the members.

7. Resolved that Government be requested to take steps to associate the Orissa State Branch of I.M.A. by inclusion of a representative in the welfare organisations such as Indian Red Cross, St. John Ambulance, Hind Kushtha Nivaran Sangha, Indian Tuberculosis Association, After Care Services Association, State Social Welfare Boards and such similar other organisations.

8. Resolved that this Conference regrets for the indifferent attitnde of the Government in not taking any action on the resolutions adopted in the Eighth Session of the Orissa State Medical Conference held at Cuttack in 1955.

9. Resolved that in view of the fact that in Orissa, Medical facilities are extremely meagre and there is a very great shortage of medical personnel in Orissa, this Conference urges on the Utkal University and the State Government to establish a second Medical College in Orissa at Sambalpur and to move the Central Government to allot one of the six new Medical Colleges provided under the Second Five Year Plan and resolved that the Central Office of the I.M.A. be specially moved to pursue the matter further at the Central level.

10. Resolved that this Conference views with grave concern the proposed transfer of the local health administration and health institutions to the Anchal Sasons and transfer of disciplinary control over the Anchal Medical and Public Health personnel to the Anchal Sabhas and Anchal Officers. The Conference is of opinion that this proposed transfer of disciplinary control over the Medical and Public Health personnel to non-professional and non-technical authorities is detrimental to professional dignity, prejudicial to professional discipline and not conducive to professional efficiency. Exclusion of the professional authorities at the district and State levels from exercise of disciplinary control over Medical and Public Health personnel and emphasis on the advisory role of the professional authorities will result in territorial and functional disintegration of the State Health Services whereas all round integration of Health Service is the accepted policy of State. The Conference strongly urges on the Government to provide for full professional and administrative Heads over all professional personnel of Public Services in all sectors of public administration.

11. Resolved that the Government be moved to make provisions for Refresher Course, free of all cost, in the Medical College and recognised District Headquarters Hospitals for all practitioners in private practice and working in the Local Bodies and in State Service in order to keep them continuously equipped in the continuous advances in Medical Science and practice.

12. Resolved that this Conference reiterates the demand made by the All India Medical Conference to amend the Indian Medical Council Act 1933 in such a way as to include all the medical practitioners statutorily recognised by the different State Medical Councils under one schedule and in one common Register.

13. In view of the fact that our country has set out on the programme of achieving material progress and prosperity of a welfare state and whereas for realisation of this goal genius and talent alone is so essential in various branches of science especially in the Medical research, it is resolved that this Conference views with grave concern the steady absorption of an amazing number of talented sons of the country every year in the administrative department leaving average students to the scientific pursuits and urges on the Union Government to be alive to this colossal waste of India's creative power and take such steps as are necessary to stop this deplorable state of the country by ensuring equal measure of financial and emotional security at suitable levels of the public services.

This, in the opinion of the Conference can be achieved by thorough reclamation of services both at the Union and State levels.

14. Resolved that Government be requested to fix the pay scale of Assistant Surgeons in the scale of Rs. 200/- to Rs. 700/- per month.

15. Resolved that in view of the fact that great works of development are being undertaken in the work of reconstruction, the Medical Association which is eager to play its role should be taken into confidence by Government in plans made and laws framed.

16. Resolved that the State Government be requested to provide a well equipped Public Health-*cum*-Pathological Laboratory in District Headquarters Hospitals and should take advantage of the scheme drawn up by the Government of India in this connection during the Second Five Year Plan period.

17. Resolved that Government be moved to start a Smallpox vaccine lymph Laboratory and Antirabic vaccine Laboratory in Orissa.

BRANCH NOTES

AGRA BRANCH—The annual report of the branch shows that 13 meetings were held during the year 1955-56. There was a slight decline in membership. A Relief Camp at Fatehpur Sikri was organised during the floods Office bearers for 1956-57 were elected with Dr. C. B. Singh as president, Dr. G. K. Taigi as hony. secretary and Dr. V. G. Kante as hony. joint secretary.

ALWAR BRANCH—A special meeting of the branch was held on 10-11-56 to welcome Dr. P. R. Trivedi, the senior vice-president. Dr. Trivedi exhorted all present to increase membership, to raise "building fund" for the Central Office and to encourage circulation of Your Health.

A clinical meeting of the branch was held on 21-11-56, with Dr. C. M. Sharma in the chair. Dr. Mathur, the hony. secretary requested members to contribute liberally to the Central Building Fund. Dr. A. N. Sharma gave a talk on Lamellar Cataract.

BIKANER BRANCH—The branch regularly conducted Saturday meetings in which clinical subjects were also discussed. Dr. P. R. Trivedi, the Vice-President, I.M.A. paid a visit to the branch and requested members to contribute to the Central Building Fund. Rs. 738/- was collected on the spot.

COIMBATORE RBANCH—A meeting of the branch was held on 21-10-56. Eighty-five members were present. Dr T. V. Sivanandam presided. Dr. S. N. Cooper, Ophthalmic Surgeon, Bombay, delivered a lecture on Ophthalmological Aspects of Diabetes.

CUTTACK BRANCH—The annual general body meeting of the branch was held on 17-11-56. Twenty-three members were present. Office-bearers for 1956-57 were elected with Dr. A. B. Charya as president, Dr. L. N. Mahapatra as secretary and Dr. Sudhakar Acharya and Dr. U. P. Naik as asst. secretaries.

DEOLALI BRANCH—At the monthly clinical meeting held on 18-11-56, Major S. S. Rao of Military Hospital, Deolali was given farewell by the association. Dr. Pandit presided over the function.

DOOM DOOMA BRANCH—A meeting of the branch was held on 13-9-56. A condolence resolution was moved from the chair and passed. The annual report of 1955-56 was adopted. Three new members were enrolled during the year. Dr. R. K. De and Dr. R. D. Chowdhury were re-elected president and secretary respectively. Dr. Banerjee read 2 case notes (1) A case of Ruptured Tubal Pregnancy with the products of conception escaping in the broad legament, (2) a case of Uterine Rupture in a Multipara; Dr. De on a case of Appendicitis; Dr. Chakravorty on a case of Ascariasis Simulating Intestinal Obstruction.

GADAG BRANCH—The annual general meeting of the branch was held on 16-10-56. Office-bearers for 1956-57 were elected with Dr. H. B. Konnu as president and Drs. G. S. Kulkarni and R. A. Jalinal as hony. joint secretaries.

GARBETA BRANCH—Under the auspices of the branch, 100 non-registered medical practitioners and registered pharmacists assembled to discuss the problem of their livelihood due to the enforcement of the Drug Rules. Dr J. Mazumdar, hony. general secretary, Bengal Provincial Branch, IMA, requested the audience to dispassionately study the question from the national welfare point of view and spoke about the motives behind the Drug Rules. He hoped that a provision would be made to train these people as health assistants for employment in the expanding hospitals, health centres and public health departments. Besides members of the branch Dr. K. P. De, vice-president of the Bengal Prov. Branch, IMA, was also present.

JAMTARA BRANCH—A meeting of the committee of the branch was held on 25-11-56 with Dr. G. S. P. Sinha in the chair. Twelve members were present. In the opinion of the members, doctors should be encouraged to settle in rural areas with Government subsidy and that the Community Block Sub-Centres should be manned by private practitioners on remuneration, under the Health Officer instead of leaving these blocks under the care of dressers for 5 days in the week as is done.

JALPAIGURI BRANCH—The annual report of the branch shows that membership increased during the year.

One annual general meeting, three ordinary general meetings, three extra-ordinary general meetings and seven working committee meetings were held during the year. The 15th Bengal Provincial Medical Conference was invited to be held at Jalpaiguri. The members condoled the death of Dr. Dhiraj Mohan Sen, one of the Vice-Presidents of the branch and Dr. Harendra C. Mukharjee, Governor of West Bengal. The members protested against the proposed introduction of IMA Bill of 1956 in the Rajya Sabha. The State Government was requested to establish one Zonal University at Jalpaiguri. Office-bearers for 1956-57 were elected with Dr. A. Guha Niyogi as president, Dr. S. C. Bhowmick as hony. secretary and Dr. J. N. Moitra and Dr. H. M. Hore as hony. asst. secretaries. It was decided to form one Working Committee. The secretary of the branch was requested to prepare a memorandum to the ITPA regarding pay scale, leave, allowances of the Garden Medical Officers in conformity with the scale of ITA.

JODHPUR BRANCH—A meeting of the branch was held on 7-12-56. Dr. Pamandas presided. Dr. G. Purohit delivered a lecture on Portal Hypertension, which was followed by a discussion. It was decided to hold the next meeting on 14-12-56.

JORHAT BRANCH—The annual general meeting of the branch was held on 5-11-56 with Dr. S. N. Dutta in the chair. Office-bearers for 1956-57 were elected with Dr. S. N. Dutta as president, Dr. S. K. Mojumdar as secretary and Dr. T. K. Sarkar as asst. secretary.

A meeting of the branch was held on 8-12-56 with Dr. S. N. Dutta in the chair. The members expressed a deep sense of sorrow at the tragic and premature death of Dr. L. K. Dutta Chowdhury, Civil Surgeon, Nowgong.

KANPUR BRANCH—A clinical meeting of the branch was held on 20-11-56. Dr. K. R. Chaudhri spoke on "Some interesting conditions of the Urinary Tract met with in general practice and their treatment".

KARIMNAGAR BRANCH—A meeting of the branch was held on 25-11-56 with Dr. Gulam Nabi, Civil Surgeon, in the chair. Twenty-one members were present. The members paid homage to the memory of late Shankar Rao Jadhave. In the clinical meeting that followed, the following cases were discussed.

1. A case of Lung Abscess; 2. Epilepsy by Dr. Gulam Nabi, Civil Surgeon, Karimnagar District; 3. Cervical Rib by Dr Mohd. Afzal Ali, medical officer, Ramagudam; 4. Gumma of Left Foot and Left Leg by Dr. Miss C. Kufphernagel, Dr. G. Wary of Mission Hospital, Karimnagar.

KHAMMAMETH BRANCH—A meeting of the branch was held on 2-12-56. Office bearers for 1956-57 were elected with Dr. D. Tulasi Dass as president and Dr. K. S. N. Murthy as secretary. The members decided to hold monthly meetings on every penultimate Saturday and fixed the annual subscription at Rs. 15/- only.

A meeting of the branch was held on 9-6-56 with Dr. D. Tulasi Dass in the chair. Dr. Miss Balwanu Kaur read reports of three Obstetric cases. In the next meeting of the branch Dr. S. A. Majeed read a paper on Cardiac Emergencies in Medical Practice.

On 17-11-56, a meeting was held with Dr. D. Tulasi Dass in the chair. Dr. Y. R. K. Murthy read a paper on "Anaesthesia in General Practice".

MADURA BRANCH—A meeting of the branch was held on 24-11-56. Dr. M. Venkatachalam Chettiar presided. Dr. A. Krishnaswamy of Government Erskine Hospital, Madurai, spoke on "Radiotherapy". A film on "Sialography" was exhibited.

MANDAPETA BRANCH—The annual conference of the branch was held on 24-11-56 with Dr. K. Chandrarao, D.M.O., East Godavary District, in the chair. Dr. D. J. Reddy, Principal, Guntur Medical College, spoke on Modern Trends in Diabetes Mellitus with special reference to BZ 55 with its uses and limitations. Dr. B. Venkatraju of Samarlakot spoke on the Problems of recurrence in Hernia operation with illustrations. Col. D. S. Raju of Rajahmundry discussed about the diagnosis and Treatment of Acute Pain in the chest. Eighty doctors were present.

MORVI BRANCH—A meeting of the branch was held on 9-12-56 to congratulate Dr. S. V. Baxi on his brilliant success at the M.D. examination. Dr. D. V. presided. Dr. S. V. Baxi read a paper on "Common Cardiac Emergencies."

NABADWIP BRANCH—The report of the branch for 1955-56 shows that 16 meetings were held during the year including 2 emergent meetings and 2 clinical meetings. During the flood in October 1956 the branch tried its best to serve the affected people.

NILGIRI DISTRICT BRANCH—The annual report of the branch shows a slight fall in membership. Twelve monthly meetings were held during the year and interesting scientific discussions were held.

NIZAMABAD BRANCH—A meeting of the branch was held on 23-11-56 with Dr. S. N. Mathur in the chair. Twenty-six members were present. The meeting unanimously agreed to merge with IMA Andhra Pradesh Branch. Dr. S. N. Mathur and Dr. R. M. Nudkarni demonstrated some cases.

ORISSA STATE BRANCH—A meeting of the Council of the State Branch was held on 9-12-56 with Dr. G. Patnaik in the chair. Twelve members were present. The proceedings of the annual meeting of the Council was confirmed. The council authorised the president to arrange the acquisition of onefourth acre of land near the S. C. B. Medical College, Cuttack for a building of the Association.

The report of the branch for the year 1955-56 shows that the association organised a Flood Relief Committee for relief work. The committee met regularly to organise and conduct relief. The total number of branches in the state is 9 with a total membership of 221.

Office bearers for 1956-57 were elected with Dr. G. Patnaik as president and Dr. G. B. Mohanty as secretary.

PATTI BRANCH—The annual meeting of the branch was held on 22-11-56. Dr. G. S. Rekhi presided. Office bearers were elected with Dr. G. S. Rekshi as president, Dr. Amar Singh as hony. secretary. The members bade farewel to Dr. Rekshi who was under transfer orders to Chandigarh.

PORBANDAR BRANCH—A special meeting of the branch was held on 1-10-56. Thirty members were present. Dr. R. R. Soneji was in the chair. Dr. (Mrs.) Sushilabel Gore, Officer-in-charge, Family Planning, Ministry of Health, Government of India, spoke on "Family Planning" and its various aspects.

A meeting of the branch was held on 18-11-56 on the occasion of the Health Minister's visit to Porbandar. Seventeen members were present. A number of respectable gentlemen was also invited to the meeting. There was a frank discussion with Shri M. S. Kanarwar, the Health Minister, about important medical topics, local and general and an exchange of views on these

SAHARANPUR BRANCH—The annual meeting of the branch was held on 6-10-56. Office bearers were elected with Dr. A. M. Biswas as president, Dr. P. S. Mathur as secretary, Dr. Mohd. N. Siddiqi as joint secretary. The annual report for 1955-56 shows that 8 general, 12 clinical and 2 executive meetings were held during the year. Interesting clinical subjects were discussed and x'ray plates shown.

SHILLONG BRANCH—The annual general meeting of the branch was held on 23-11-56 with Dr. J. K. Saikia in the chair. Fifty-three members were present. The annual report of the secretary for 1955-56 shows that the following schemes were taken in hand: (1) Health Education in the adjoining villages of Shillong, (2) Establishment of a medical library, (3) Procuring of a permanent place for the association office.

SHIMOGA BRANCH—A meeting of the branch was held on 9-12-56. Sri S. T. Parthasarathy of Thirthahalli presided. The following subjects were discussed:

1. The Value of Unipolar Electro-Cardiography, (2) Dehydration in Infancy and Childhood by Dr. S. Loganandan; (3) Clinical Application with case reports by Dr. S C. Kuppanna; (4) Some Aspects of Fevers in Sri Jayachamavagendro Hospital, Tirthorhalli by Dr. S. T. Parthasarathy.

SIMRAHI BRANCH—A meeting of the branch was held on 26-8-56. Organisational and professional matters were discussed.

The general meeting of the branch was held on 9-9-56. Dr. S. N. Sen Gupta read a paper on "Diarrhoea and Vomiting in Children".

A meeting of the branch was held on 6-10-56. The election of office-bearers which were to have been held was postponed as sufficient number of members did not attend.

A general meeting of the branch was held on 11-11-56. Office-bearers were elected with Dr. R. R. P. Singh as president, Dr. M. Das as hony. secretary and Dr. B. B. Singh as joint secretary. A case of Parkinsonian Syndrome was presented.

SOUTH ARCOT BRANCH—The annual meeting of the branch was held on 27-10-56 with Dr. N. Rayomanickam in the chair. Office-bearers for 1956-57 were elected with Dr. C. Seshachalam as president and Dr. A. A. Shukoor and Dr. P. Vaidyanathan as hony. secretaries. Dr. G. Athmarama Rao of Madras Medical College spoke on "Treatment of Minor Infections".

ULUBERIA BRANCH—The branch was started on 19-8-56 with Dr. Kazi Kosimuddin as president and Dr. P. Chatterjee as secretary. The E.S.I. Medical Benefit Scheme was discussed. The branch took part in the medical relief works in the flooded areas.

XVI THE MAHARASHTRA & KARNATAK PROVINCIAL MEDICAL CONFERENCE, HUBLI

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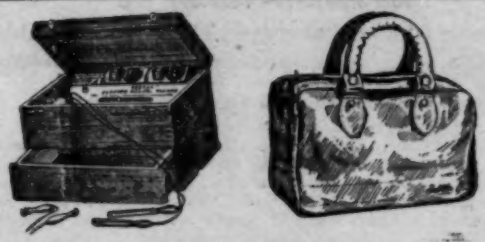

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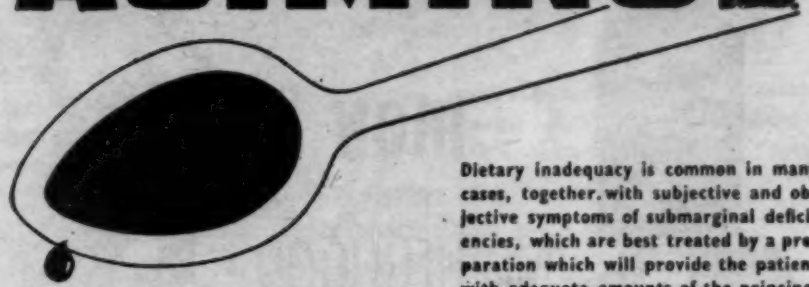

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